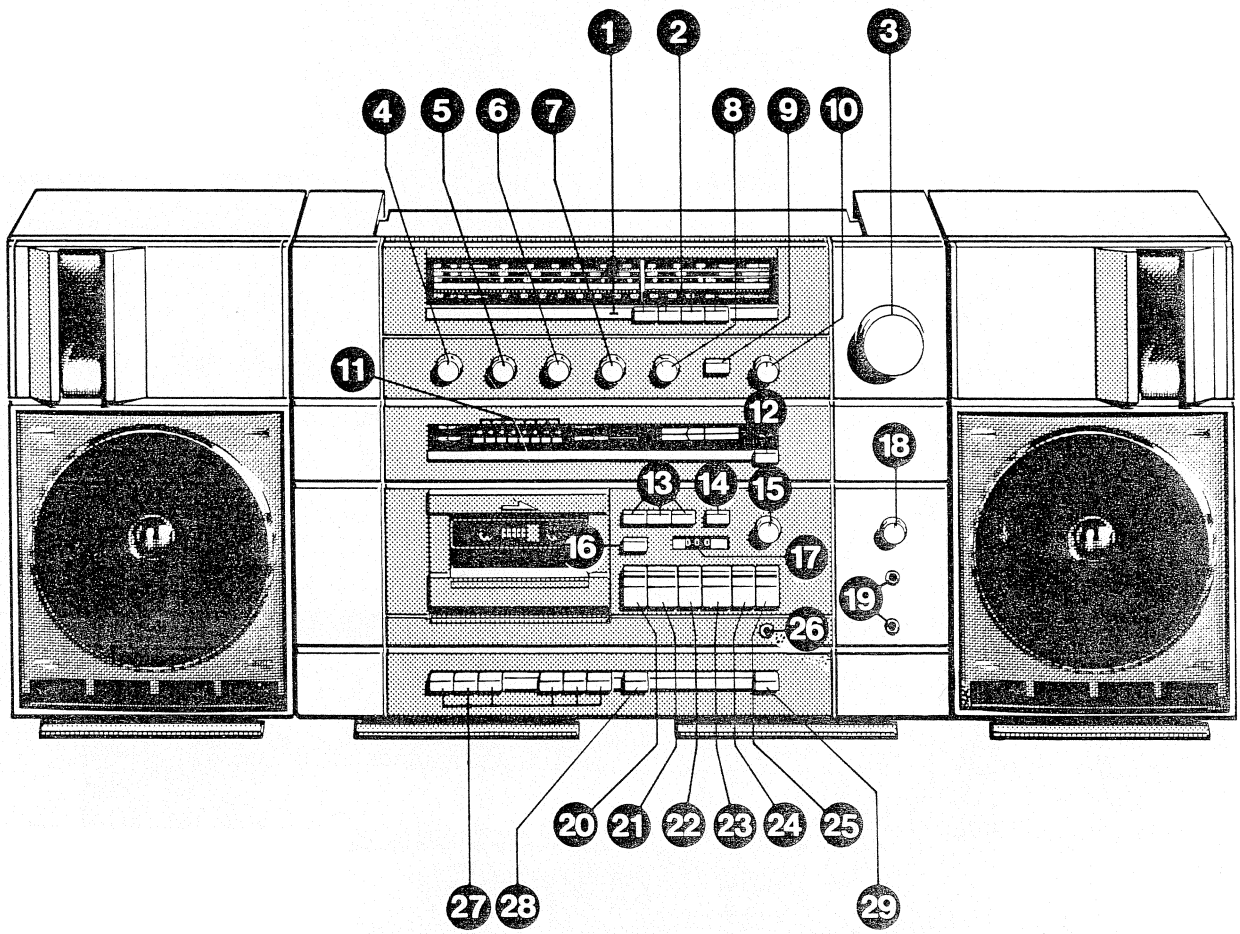
Stereo radio recorder D 8718/00/02/05

Service
Service
Service

For repair information of the cassette mechanism see Service Manual of "Recorders tape deck RS-14" and "Recorders tape deck RS-Universal".

Service Manual



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Documentation Technique Service Dokumentation Documentazione di Servizio Huolte-Ohje Manual de Servicio Manual de Serviço

PHILIPS

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

Subject to modification

4822 725 15224

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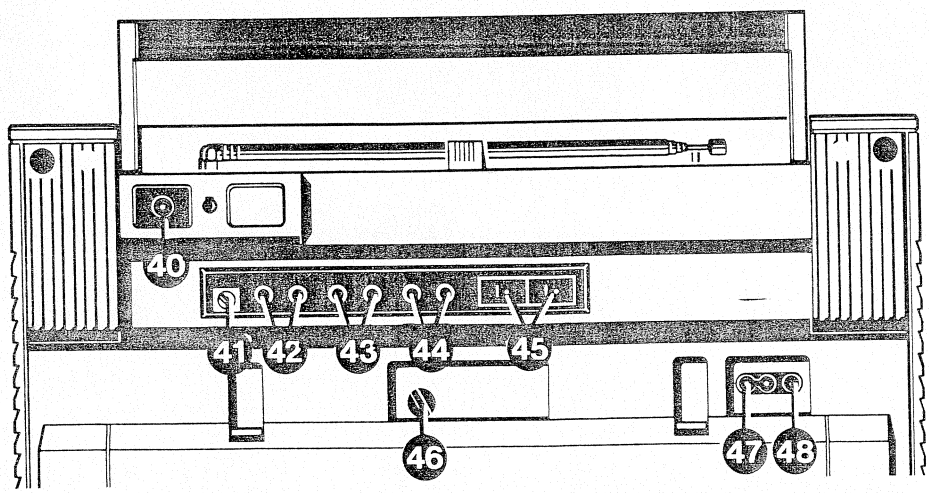
PHILIPS

CONNECTIONS AND CONTROLS

1		,,stereo indicator"	D180
2	FM-SW-MW-LW		SK101÷104
3		,,tuning"	C100
4		,,balance"	R237
5		,,bass"	R225/275
6		,,treble"	R228/278
7		,,mono-stereo-spatial"	R236
8	source	,,phono-aux-radio-tape"	SK-9
9	Loudness ON/OFF		SK-8
10		,,volume"	R230/280
11		,,VU-indic. L-R tuning/rec, power on/off	D503,504 D553,554
12		,,power ON/OFF"	SK280
13	Tape select	,,normal-Cr02-metal"	SK17÷19
14	Mode	,,A.L.C./manual"	SK20
15		,,rec-manual"	R403/453
16		,,eject"	
17		"tape counter"	
18		,,micro-mixing"	R901/951
19		,,external mic"	BU901-BU951
20		,,pause"	SK22/D709
21		,,stop"	SK23
22		,,rewind"	SK24
23		,,play"	SK25/D708
24		,,fast forward"	SK26
25		,,recording"	SK27/D710 SK15
26		,,headphone"	BU13/SK13
27		,,tape program search system"	SK28÷33
28		,,automatic repeat"	SK34
29		,,dynamic noise reduction"	SK920
40	75 Ω	,,external antenne"	BU101 (only for /00/05)
41		,,ground connection"	
42		,,Md phono line in"	BU4-BU5
43	Aux	,,Aux line in"	BU6-BU7
44		,,line out"	BU8-BU9
45		,,external loudsp"	BU10-LS1/LS2 BU11-LS101/LS102
46	Δf	,,Rif"	SK16
47	V~	,,mains inlet"	BU601/SK601
48	V⎓	,,external supply"	BU602/SK602



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SPECIFICATIONS

	Minimum values		Typical values
V⎓	: 10-16 V	ext. speakers L-R; 4 Ω 5 W sin-10 W peak	
⊣⊢	: 15 V (10xR20)	200 Hz-12 kHz within 10 dB two speakers:	
	220 V, 50/60 Hz 240 V, 50/60 Hz/05	LS1/LS101 7" woofer LS2/LS102 piezo tweeter	
	2x5 W - 1 dB d ⩽ 10%	(Sine wave)	2x 10 W max. output power

Headphone Amplifier 30 Hz - 15 kHz; within 6 dB
1 mW (8 Ω) ÷ 10 mW (600 Ω) d ⩽ 10 dB

IF-FM : 10,7 MHz
IF-AM : 468 kHz ± 2 kHz
FM : 87,5 - 108 MHz $^{+0,5}_{-0,3}$ MHz
SW : 2,3 - 7,3 MHz
LW : 150 - 255 kHz
MW : 520 - 1605 kHz

Tape speed: 4,76 cm/s ± 2% (15-35°C)
Wow and flutter ⩽ 0,3% (4,76 cm/s) — Wow and flutter ⩽ 0,09% WRMS (at 4,76 cm/s)
Bias freq. (SK-16 „0") 73 kHz

Frequence response

		Typical values
(within 8 dB)	60 Hz - 10 kHz ; normal	50 Hz - 12 kHz; normal — within
	60 Hz - 12 kHz ; Cr02	50 Hz - 14 kHz; Cr02 — 8 dB
	60 Hz - 14 kHz ; metal	50 Hz - 15 kHz; metal — at 4,76 cm/s

Input sensitivity (acc. UAN-0170)	Exet. microphone	0,3 mV/4k7 Ω BU901/951	
	Phono-MD	3,5 mV/47 kΩ BU4/BU5	
	Aux/line in	150 mV/470 kΩ BU6/BU7	
Output	line out	BU8/BU9 ⩾ 500 mV/10 kΩ	
	loudspeakers	4-8 Ω BU10/BU11	
	headphone	8 Ω ÷ 600 Ω BU13	

(GB) DISMANTLING

Backcover

— Remove the 4 screws (2.9 x 25) which attach the backcover to the case.
— The telescopic aerial may be left in place.
— Slightly lift the backcover and:
  a. Remove the cable tag from the aerial socket BU101.
  b. Remove aerial socket BU101.

Note:
When reuniting the backcover to the case, take care that the leads to aerial socket BU101 do not get stuck.

I. Recorder PC-board (Figs. 1, 2)
— Take out the 2.9 x 13 screw indicated by arrow "1".
— Release recorder bracket from recorder switch as shown by arrow "2".
— Slightly lift PC-board as shown by arrows "3" and take it out of amplifier PC-board (arrow "4").

II. Tape transport (comprising drive, control and tape select PC-boards) (Refer to Fig. 3)
— Perform operation I.
— Take out the screws A through G.
— Open the cassette lid.

III. Drive PC-board + control PC-board (refer to Fig. 4)
— Perform the operations I and II.
— Take out the two 2.2 x 9.5 screws indicated by the arrows "1".
— Slightly lift the drive PC-board out of its holder as indicated by arrow "2". Release the control PC-board by bending out the fastening lugs as shown by the arrows "3".
— Remove the PC-board assy as shown by arrow "4".

Note:
When reassembling, first make sure that the three LED's on the control PC-board are correctly oriented with respect to their relevant apertures.

(NL) UITKASTEN

Achterwand

— Verwijder de 4 schroeven (2.9 x 25) uit de achterwand.
— De telescoopantenne kan blijven zitten.
— Licht de achterwand een weinig op en:
  a. Verwijder het kabelschoentje van de atennebus BU101.
  b. Verwijder de antennebus BU101.

Opmerking:
Bij het terug plaatsen van de achterwand dient men erop te letten dat de bedrading van antennebus BU101 niet beklemd geraakt.

I. Recorderprint (Fig. 1, 2)
— Verwijder schroef 2.9 x 13 aangegeven met "1".
— Maak recorderbeugel vrij van recorder-schakelaar volgens "2".
— Licht de print een weinig op volgens "3" en neem hem uit de versterkerprint volgens "4".

II. Loopwerk inclusief sturing, bediening en tape-select (zie Fig. 3)
— Verricht handeling I.
— Verwijder de schroeven A t/m G.
— Open de cassetteklep.

III. Sturingsprint met bedieningsprint (zie Fig. 4)
— Verricht handeling I en II.
— Verwijder de 2 schroefjes 2.2 x 9.5 volgens "1".
— Licht de stuurprint een weinig uit de houder volgens "2".
— Neem het bedieningsprintje weg door de bevestigingslippen volgens "3" weg te buigen.
— Neem het geheel weg volgens "4".

Opmerking:
Bij het terug plaatsen van het geheel dient men er zich van te voren van te overtuigen, dat de 3 LED's op het bedieningsprintje goed t.o.v. de doorvoeringen georiënteerd zijn.

(F) DEMONTAGE

Panneau arrière

— Enlever les 4 vis (2.9 x 25) du panneau arrière.
— L'antenne téléscopique peut rester en place.
— Soulever quelque peu le panneau arrière et,
  a. enlever le patin autour du câble sur la douille BU101.
  b. enlever la douille d'antenne BU101.

Remarque:
Lors du montage du panneau arrière il faudra faire attention de ne pas coïncer le câblage de la douille d'antenne BU101.

I. Platine magnétophone (Fig. 1, 2)
— Enlever la vis 2.9 x 13 marquée "2".
— Dégager l'étrier du magnétophone selon l'indication "2".
— Soulever quelque peu la platine selon "3" et l'extraire de la platine de l'ampli selon "4".

II. Mécanique (platine de contrôle, platine de commande et sélection de bande) (voir Fig. 3)
— Procéder à l'opération I.
— Enlever les vis A à G.
— Ouvrir le porte-cassette.

III. Platine de contrôle et platine de commande (voir Fig. 4)
— Procéder aux opérations I et II.
— Enlever les deux vis 2.2 x 9.5 selon "1".
— Soulever quelque peu la platine de contrôle du support selon "2".
— Extraire la platine de commande enpliant les languettes de fixation selon "3".
— Enlever l'ensemble selon "4".

Remarque:
Avant de remonter l'ensemble, il faut s'assurer de ce que les 3 LED sur la platine de commande soient bien en regard des ouvertures de traversée.

(D) AUSBAU

Rückwand

— Die 4 Schrauben (2.9 x 25) aus der Rückwand herausdrehen.
— Die Teleskopantenne muss nicht abgenommen werden.
— Die Rückwand ein wenig heben und
  a. den Kabelschuh von der Antennenbuchse BU101 abziehen;
  b. Antennenbuchse BU101 ausbauen.

Bemerkung:
Wenn die Rückwand zurückgestellt wird , ist zu beachten, dass sich die Verdrahtung der Antennenbuchse BU101 nicht verklemmt.

I. Recorder-Printplatte (Bild 1 und 2)
— Mit "1" gekennzeichnete Schraube 2.9 x 13 lösen.
— Recorderbügel von Recorderschalter entsprechend "2" lösen.
— Printplatte entsprechend "3" ein wenig heben und entsprechend "4" aus der Verstärkerprintplatte herausnehmen.

II. Laufwerk einschliesslich Steuerung, Bedienung und "tape-select" (siehe Bild 3)
— Vorgang I durchführen.
— Schrauben A bis G lösen.
— Öffnen Sie das Kassettenfach.

III. Steuerprint mit Bedienungsprint (siehe Bild 4)
— Vorgänge I und II durchführen.
— Die beiden Schrauben entsprechend 2.2 x 9.5 entsprechend "1" lösen.
— Den Steuerprint entsprechend "2" ein wenig aus der Fassung heben.
— Bedienungsprint ausbauen indem die Befestigungslappen entsprechend "3" auswärts gebogen werden.
— Die Gesamtheit entsprechend "4" beseitigen.

Bemerkung:
Wenn die Gesamtheit eingebaut wird, soll man sich vorher davon überzeugen, dass die 3 Leuchtdioden auf dem Bedienungsprint richtig zu den Durchführungen orientiert sind.

(I) SMONTAGGIO

Coperchio posteriore

— Togliere le 4 viti (2.9 x 25) che fissano il posteriore al mobile.
— L'antenna telescopica può rimanere montata.
— Sollevare leggermente il posteriore e:
  a. Togliere il capocorda dalla presa d'antenna BU101.
  b. Togliere la presa d'antenna BU101.

Nota:
Quando si rimonta il posteriore al mobile, fare attenzione che il cablaggio non tocchi la presa d'antenna BU101.

I. Circuito stampato del registratore (Fig. 1, 2)
— Togliere la vite 2.9 x 13 contrassegnata dalla freccia "1".
— Liberare la staffa dal commutatore del registratore come indicato dalla freccia "2".
— Sollevare leggermente il circuito stampato come riportato dalla freccia "3" e togliere la parte del registratore dal circuito stampato dell'amplificatore (freccia "4").

II. Parte del registratore (compreso i circuiti di trascinamento, controllo e selezione nastri), vedere Fig. 3
— Procedere all'operazione I.
— Togliere le viti A attraverso G.
— Aprire il porta cassetta.

III. Circuito stampato di trascinamento + circuito stampato di controllo (vedere Fig. 4)
— Procedere alle operazioni I en II.
— Togliere le due viti 2.2 x 9.5 indicate dalle frecce "1".
— Sollevare leggermente il circuito stampato relativo al trascinamento dal suo supporto come indicato dalla freccia "2". Liberare il circuito stampato di controllo piegando verso l'esterno le lamelle di fissaggio come indicato dalle frecce "3".

Nota:
Quando si rimonta, prima fare attenzione che i tre LED sul circuito di controllo siano correttamente posizionati rispetto alla loro finestrella.

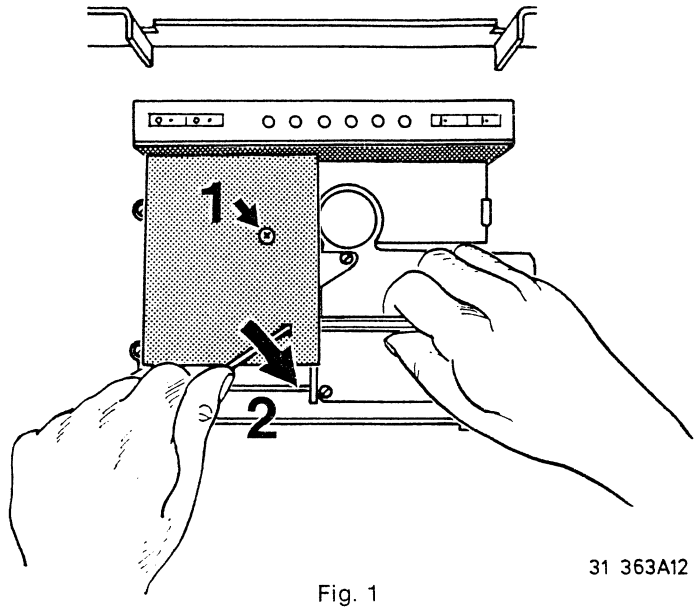

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Fig. 1

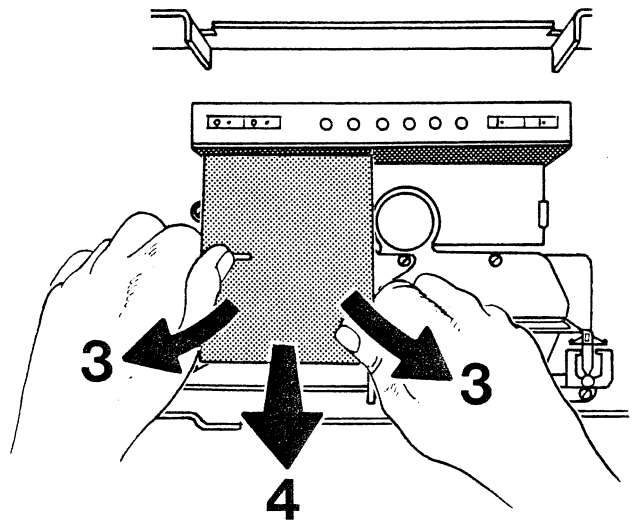

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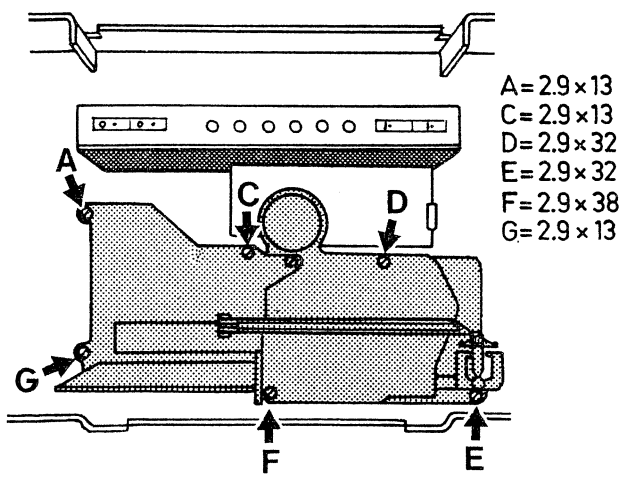
Fig. 2



A = 2.9 x 13
C = 2.9 x 13
D = 2.9 x 32
E = 2.9 x 32
F = 2.9 x 38
G = 2.9 x 13

Fig. 3

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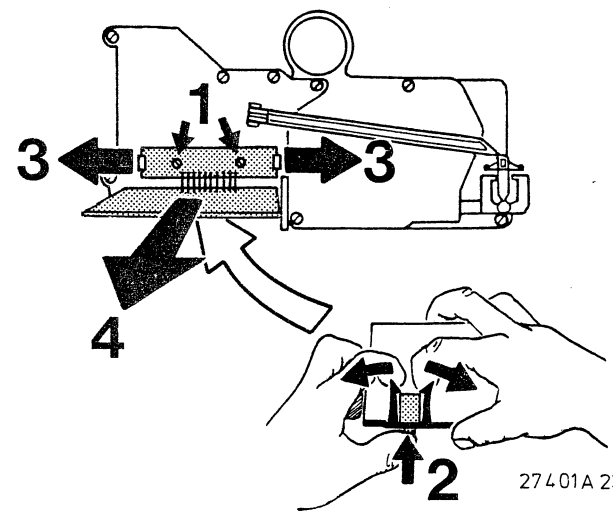

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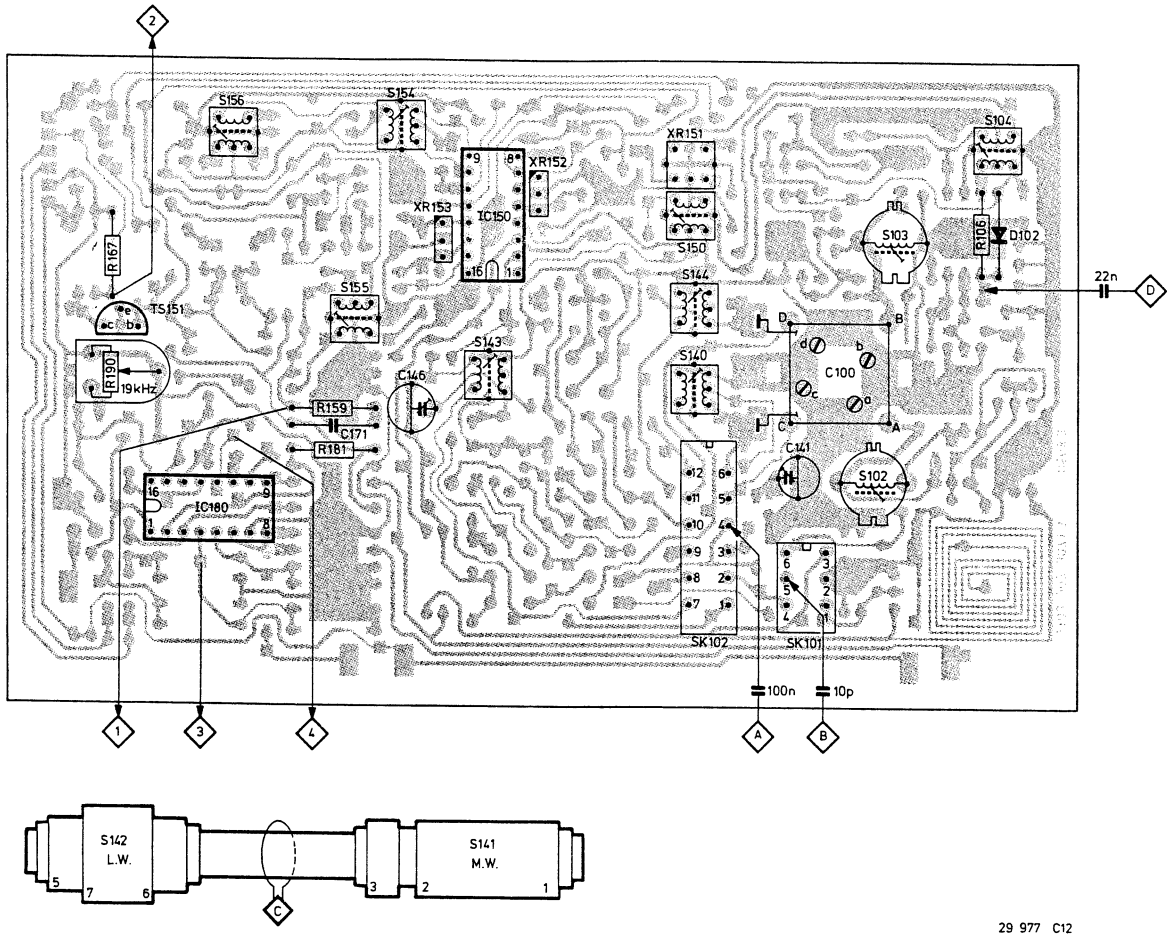
Fig. 4



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GB

1. Place the peak of the band-pass curve in the middle of the picture by shifting the sweep frequency.
2. Adjust for maximum height and symmetry.
3. Adjust for linearity and symmetry of the S-curve.

NL

1. De top van de doorlaatkromme in het midden van het scherm plaatsen door verschuiven van de wobbelfrequentie.
2. Afregelen op maximum hoogte en symmetrie.
3. Afregelen op lineariteit en symmetrie van de S-kromme.

F

1. Le top de la courbe de réponse doit être amené au centre de l'écran par glissement de la fréquence de modulation.
2. Ajuster sur hauteur et symétrie maximum.
3. Ajuster pour la linéarité et la symétrie de la courbe en S.

D

1. Die Spitze der Durchlasskurve in der Mitte des Bildes legen dadurch, dass man die Wobbelfrequenz verschiebt.
2. Abgleichen auf Maximalhöhe und Symmetrie.
3. Abgleichen auf Linearität und Symmetrie der S-Kurve.

"Bei notwendigem Abgleich ist das Gerät auf die gesetzlich vorgeschriebenen Eckfrequenzen abzugleichen."

I

1. Il pico della curva di risposta deve trovarsi al centro dello schermo, il chè si farà spostando la frequenza di Wobbulazione.
2. Regolare per un massimo di altezza e di simetria.
3. Regolare per linearità e simetria della curva ad S.

SK			C100			
MW-SK103	468 kHz *	A	Min. cap.	S150 S155		1 max.
SW-SK102	5.8 MHz *	B	Max. cap.	S144		1 max.
	18.2 MHz *		Min. cap.	C100d		
	17.0 MHz *			C100c		1 max.
	6.2 MHz *			S140		
MW-SK103	1635 kHz *	C	Min. cap.	C146		1 max.
	512 kHz *		Max. cap.	S143		
	560 kHz *			S141		1 max.
	1500 kHz *			C141		
LW-SK104	148 kHz *	C	Max. cap.	S143		1 max.
	200 kHz *			S142		
FM-IF						
FM-SK101	10.7 MHz Δf (sweep range) 10-11 MHz	D			2 1	
				S154 S104	2 2	
				S156	3 3	
FM-RF						
FM-SK101	87.35 MHz *	B	Max. cap.	S103** S102**	2	
	108 MHz *		Min. cap.	C100b C100a		

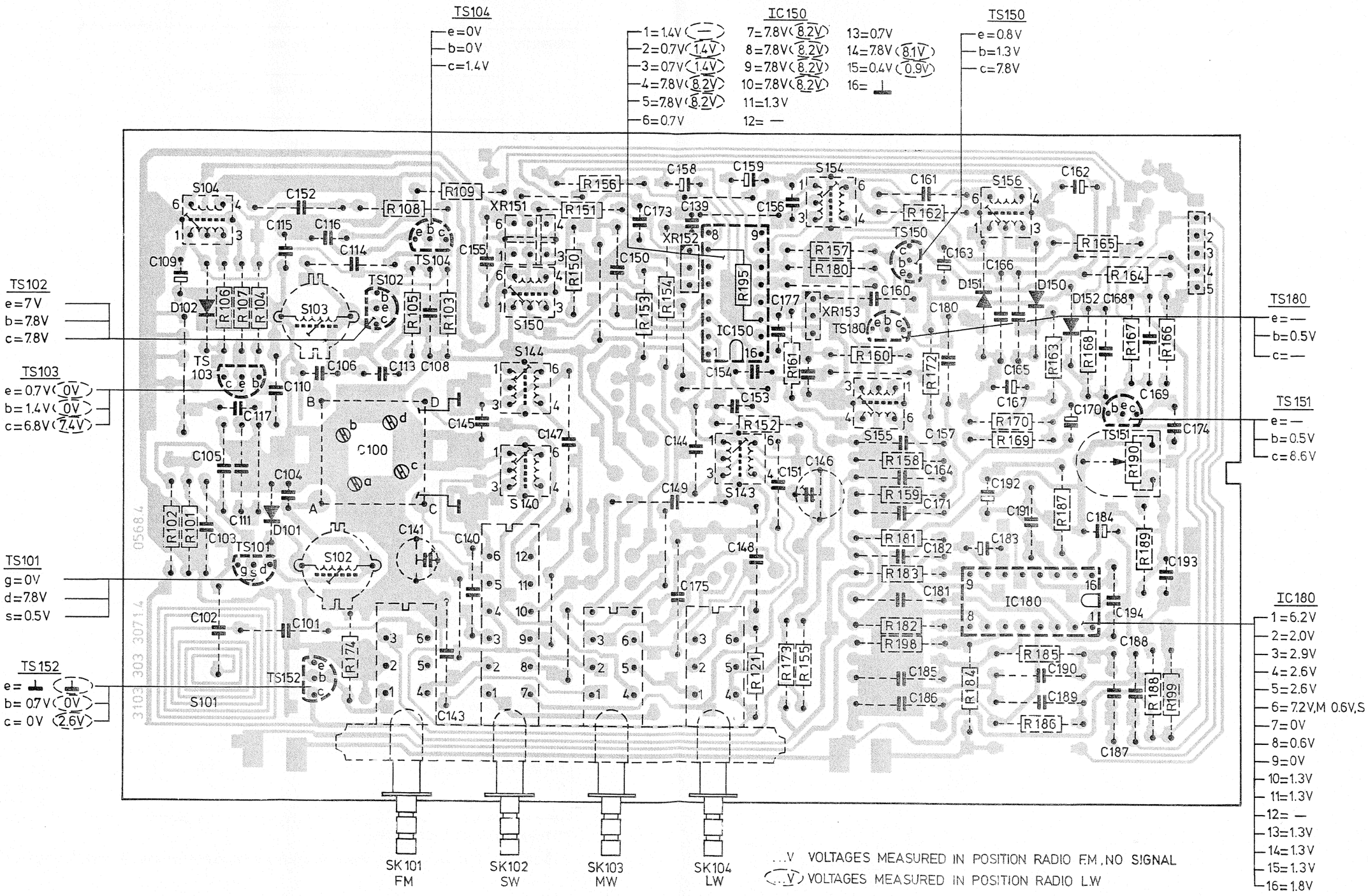
*±1 kHz modulation

Stereo-Decoder					
FM-SK101	no signal		R190		4 freq. counter 19 kHz ± 0.2

** Trimming rod 4822 395 50135

↕ Repeat - Herhalen - Répéter - Wiederholen - Ricomminciare - Repetera - Gentage - Gjentagelse - Toista

MISC	S104.D102.TS103.TS101.S103.S102.TS152.TS102.TS104.XR151.S150.S144.S140	XR152.IC150.S143.XR153.S154	TS180.TS150.S155.S156.D151.D150.IC180.D152.TS151
C	109 S101 105.117.115 110 152 114 108 155 145 147 173 139	158. 144. 159. 154. 156. 176	160.161.157.164.163.180.165..167.162.170.168.169.174
	103 102 111.106.104.101.116.100.113.141 143 140	177 149 175 153 148 151 146	171.182.181.185.186.183.192.191.189.190.184.194.187.188.193
R	106.107.104 108.105.109.103 156.150.151 153.154 195.152 161 157.180 160	162.172.198.170.169	163.168.165.164.167.180.166
	102.101 174 121 173 155	158.159.181.183.182.184.185.186.187 189 188 199	



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CS 86 254

LF CIRCUIT DIAGRAM

RADIO
AUX
PHONO
TAPE FROM REC. DIAGRAM
CUE MUTING FROM CONTROL DIAGRAM
TO REC. DIAGRAM
TO CONTROL DIAGRAM SEARCH
MIC. L
MIC. R
MIC MIX
LINE OUT L
LINE OUT R
V→I CONVERTOR
LOUDNESS
MUTE FROM CONTROL DIAGRAM
STEREO CONTROL
DNR ON
SK9 MODE: TAPE / RADIO / AUX / PHONO
SK8 LOUDNESS: ON / OFF
THE DIAGRAM IS DRAWN IN POSITION RADIO LOUDNESS OFF

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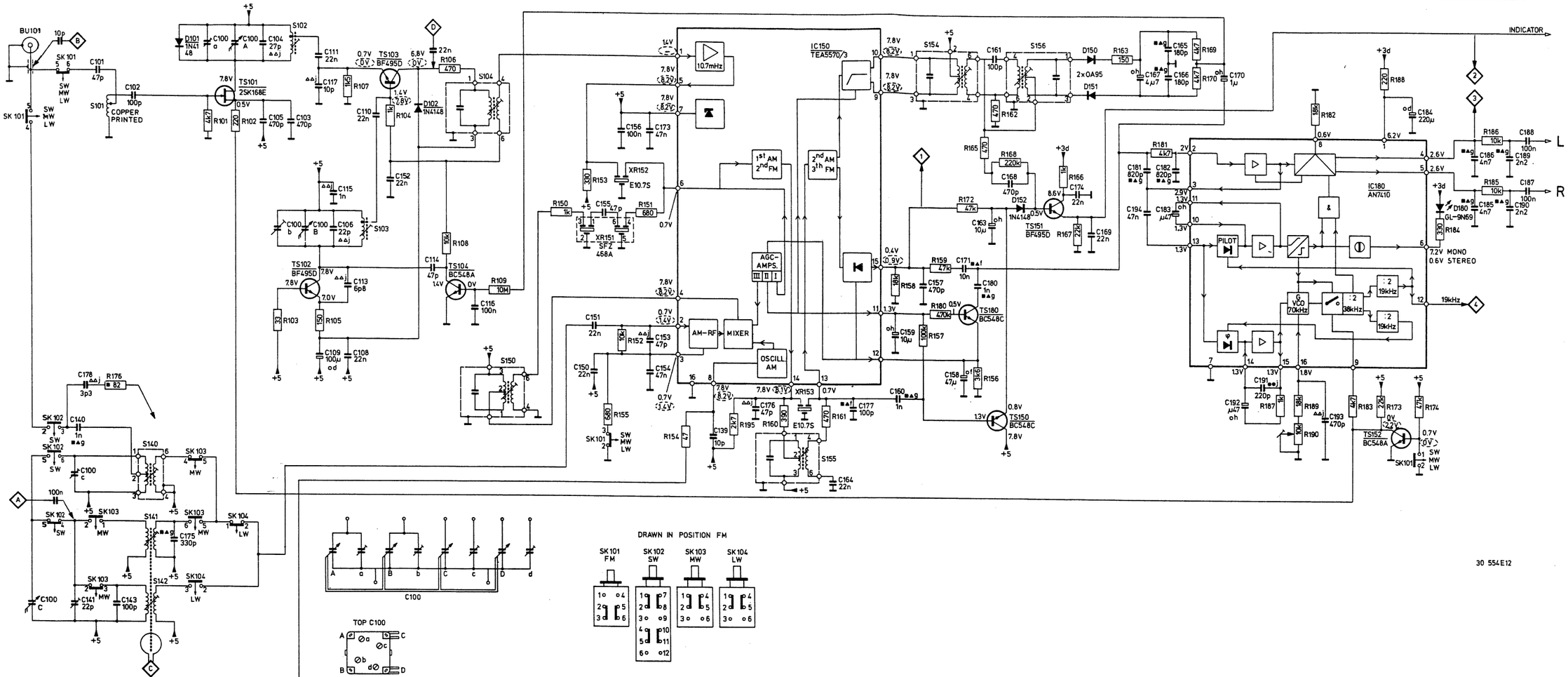
CS 86 256

R	101 102 103 105 107 104 106 108 109 150÷153 155 171 154 160 161 156÷159 180 172 162 165÷168 163 181 169 170 187 189 190 182 183 188 173 174 184 186 185	R
C	101 102 103÷106 108÷111 113÷117 152 150 151 153÷156 173 139 176 164 177 157÷160 171 161 163 180 168 174 169 165÷167.194.181÷183 170 191÷193 184 185÷190 140÷149 175	C
MISC.	BU101 S101 D101 TS101 S102 TS102 S103 TS103 D102 TS104 S104 S150 XR151 XR152 S155 XR153 IC150 S154 TS180 TS150 D152 S156 TS151 D150 D151 IC180 TS152 D180 S140÷S144	MISC.



T1	INTERCONNECT	BU601
110V	3-8/2-7	N-2
127V	3-8/2-7/1-2/5-6	N-5
220V	2-8/1-7/5-6	N-6
240V	2-8/1-6	N-5

...V VOLTAGES MEASURED IN POS RADIO, FM

...V VOLTAGES MEASURED IN POS TAPE, PLAY

A 0.2W ±5% CR-16

B 0.33W ±5% SFR-25

D 0.33W ±5% CR-25

ALL RESISTORS — B — UNLESS OTHERWISE STATED

MINIATURE ELECTROLYTIC CAPACITOR

CERAMIC PLATE CAPACITOR

POLYESTER FLAT FILM CAPACITOR

TUBULAR CERAMIC CAPACITOR

MICRO POCO ±1%

c = 6.3V h = 63 V
d = 10V j = 100 V
e = 16 V r = 250 V
f = 25V u = 400 V
g = 40V w = 630 V

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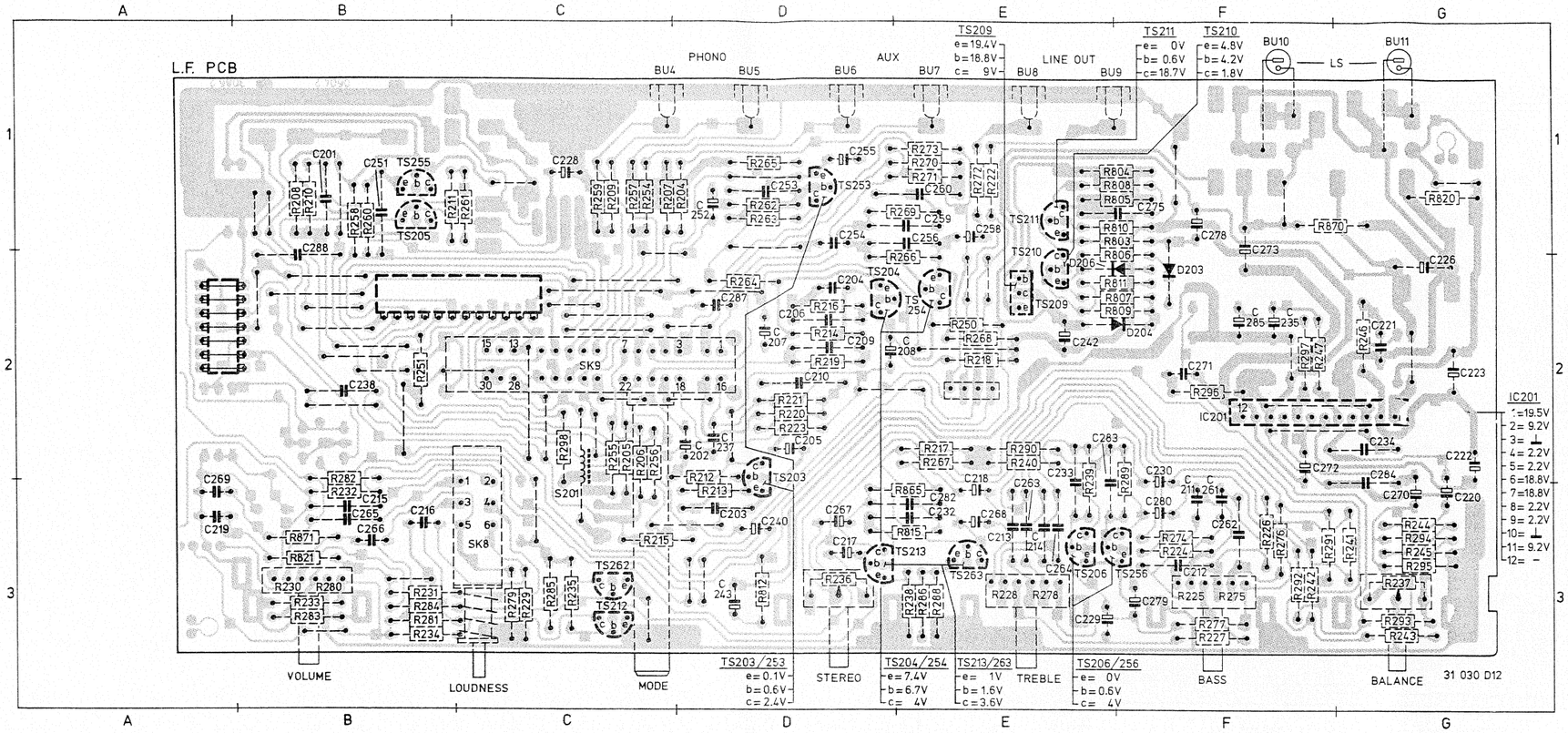
—POWER SUPPLY CIRCUIT DIAGRAM—



DNR

ITEM	PCB
C920	B01
C921	A02
C922	B01
C923	B02
C924	A02
C925	A02
C926	C03
C927	B02
C928	B03
C929	A02
C930	B03
C931	C03
C971	B02
C974	B02
C975	B02
R920	B01
R921	C01
R922	C01
R923	B02
R924	B03
R925	A03
R970	B01
R971	C01
R972	A03
IC920	B02
SK920	A03
TS920	C02

MIC MIX

ITEM	PCB
C901	D03
C902	C02
C903	D02
C904	C03
C905	B02
C906	C01
C907	C02
C908	C03
C909	C02
C951	D03
C953	D03
C954	B03
C955	A02
C956	B02
C959	B03
D901	C02
D902	B02
D903	C02
D951	B02
D952	A02

D953	B02
L920	A03
R901	D03
R902	D02
R903	B02
R904	C02
R905	D02
R906	B02
R907	C02
R908	C02
R910	B03
R911	C02
R912	C02
R913	D02
R951	D03
R952	D02
R953	C03
R954	C03
R956	C03
R957	B03
R958	B02
R960	A03
R961	B01
R962	B02
BU901	C04
BU951	B04
TS901	B02
TS951	C03

LF

ITEM	CD
BU4	A06
BU5	A02
BU6	A06
BU7	A01
BU8	F04
BU9	F04
BU10	J06
BU11	J02
BU13	J04
C201	A02
C202	B01
C203	B01
C204	C01
C205	C02
C206	C01
C208	C01
C209	C02
C210	C02
C211	G02
C212	G02

C213	H02
C214	H02
C215	F01
C216	F02
C217	F01
C218	G01
C219	F02
C220	I01
C221	J02
C222	J01
C223	J01
C224	I06
C230	H01
C232	G01
C233	H01
C234	I02
C235	I02
C237	C03
C238	B02
C240	G04
C251	A07
C252	B06
C253	B06
C254	C06
C255	C06
C256	C06
C258	C06
C259	C06
C260	C06
C261	G06
C262	G07
C263	H07
C264	H06
C265	E06
C266	F06
C267	F06
C269	F07
C270	I06
C271	J07
C272	J06
C273	J06
C279	H06
C280	H06
C282	G06
C283	H06
C284	I06
C285	I07
C287	C07
C288	B06
C901	A03
C903	A03
C904	B03
C905	B03

C906	B04
C909	B03
C920	C04
C921	C04
C922	C04
C923	D03
C924	E04
C925	E04
C926	E05
C927	D05
C928	D05
C929	E05
C930	D05
C931	E05
C951	A04
C953	A05
C954	B05
C955	B05
C956	B05
C959	B05
C971	C04
C974	E04
C975	E04
D901	B03
D902	B03
D903	B04
D951	B05
D952	B05
D953	B05
R204	A01
R205	A01
R206	A01
R207	A02
R208	A02
R209	A02
R210	A02
R211	A02
R212	B01
R213	B01
R214	C01
R215	B02
R216	C01
R217	G01
R219	C02
R220	C02
R221	C02
R222	E04
R223	C03
R224	G02
R225	G02
R226	G02
R227	G02

R228	H02
R229	E02
R230	F01
R231	F01
R232	E01
R233	F02
R234	F01
R235	F02
R236	H04
R237	I04
R238	G02
R239	H01
R240	H01
R241	H02
R242	H01
R243	I01
R244	I01
R245	I02
R246	J02
R247	I02
R251	G04
R254	A06
R255	A06
R256	A06
R257	A06
R258	A07
R259	A06
R260	A07
R261	A07
R262	B06
R263	B06
R265	B06
R266	C06
R267	G06
R268	C06
R269	E07
R280	F06
R281	F06
R282	E06
R283	F06
R284	F06
R285	F06
R286	G02

R288	G06
R289	H06
R290	H06
R291	H07
R292	H06
R293	I06
R294	I06
R295	I06
R296	J06
R297	I06
R765	J04
R767	J04
R815	F01
R820	J02
R821	F02
R865	F06
R870	J06
R871	F06
R902	A03
R903	A03
R904	A03
R906	B03
R907	B03
R908	B04
R910	B03
R911	B04
R912	C03
R920	C04
R921	C04
R922	C04
R923	D05
R924	D05
R925	D05
R951	A05
R952	A05
R953	A04
R954	A05
R956	B04
R957	B05
R958	B05
R960	B05
R961	B05
R962	C05
R964	B05
R970	C04
R971	C04
S920	E05
BU901	A03
BU951	A04
IC201A	I01
IC201B	I06
IC920	D04

SK920	E05
TS203	B01
TS204	C01
TS205	A02
TS206	H02
TS212	F02
TS213	G01
TS253	B06
TS254	C06
TS255	A07
TS262	F06
TS263	G06
TS901	B03
TS920	C04
TS951	B05

LF

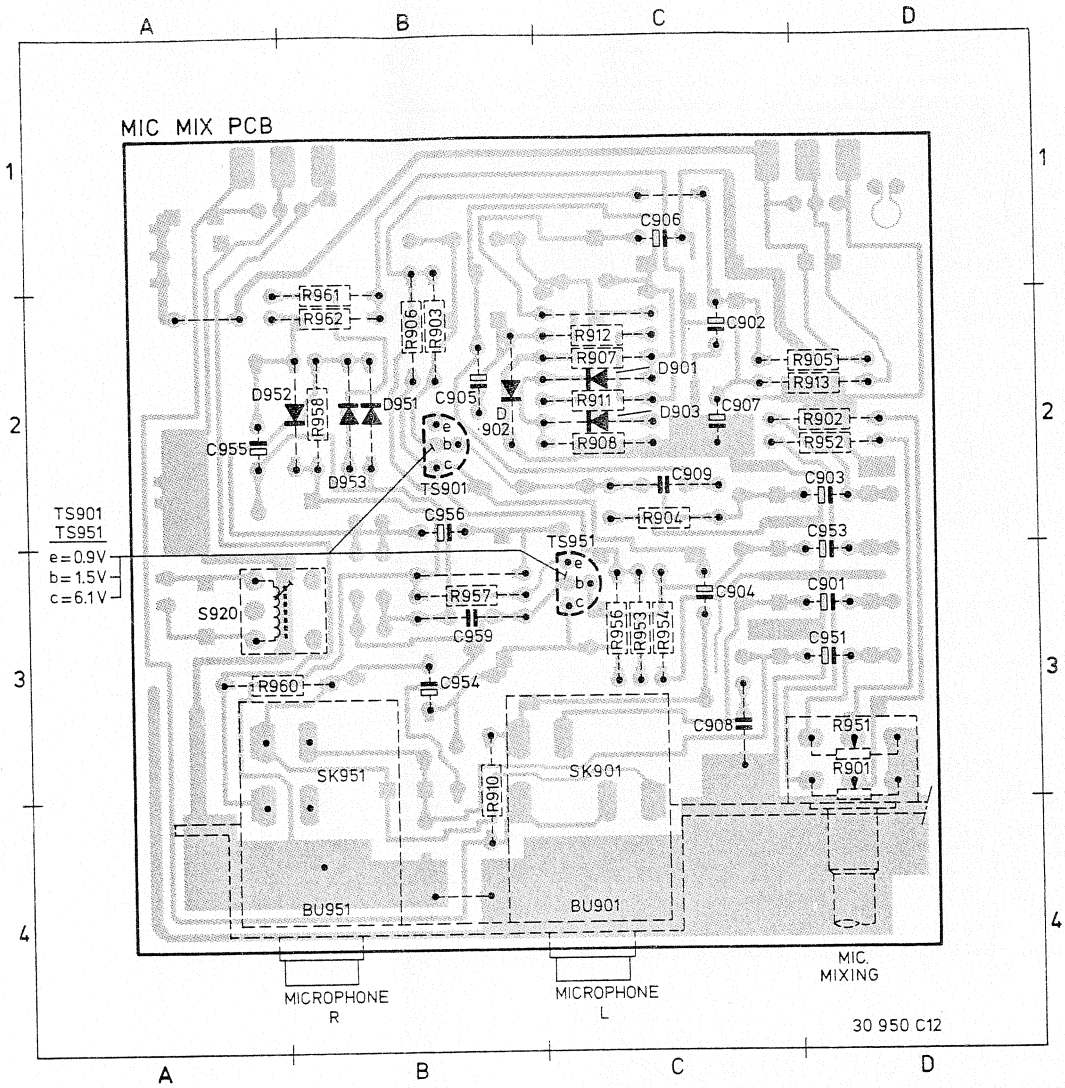
ITEM	PCB
BU4	D01
BU5	D01
BU6	D01
BU7	E01
BU8	E01
BU9	F01
SK8	C03
SK9	C02
BU10	F01
BU11	G01
C201	B01
C202	D02
C203	D03
C204	D02
C205	D02
C206	D02
C207	D02
C208	E02
C209	D02
C210	D02
C211	F03
C212	F03
C213	E03
C214	E03
C215	B03
C216	B03
C217	D03
C218	E03
C219	A03
C220	G03
C221	G02
C222	G02
C223	G02

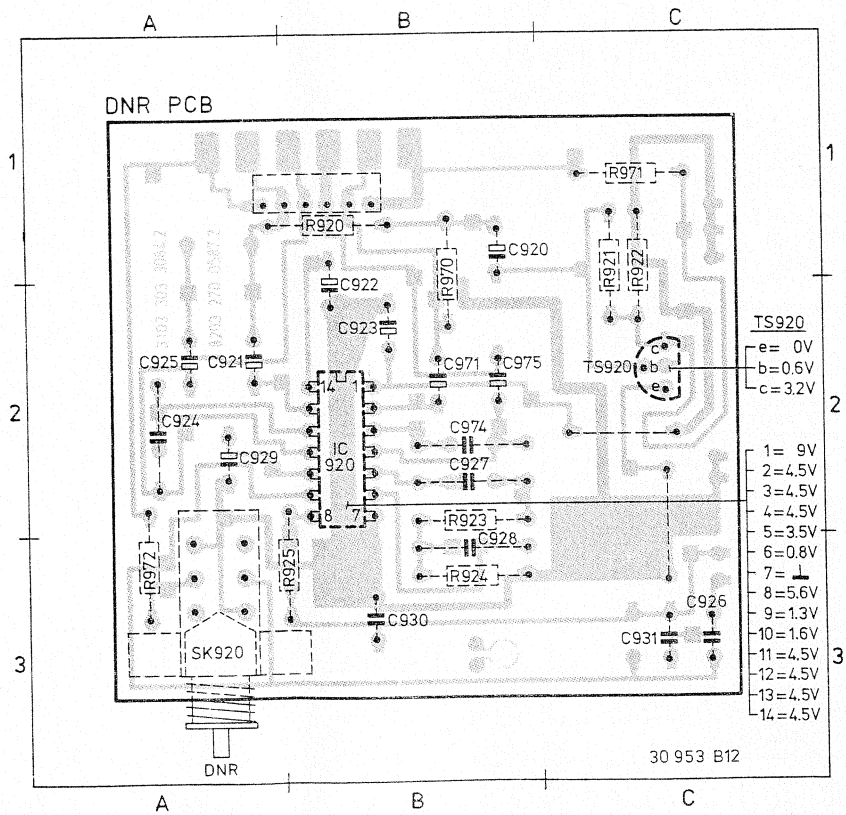
C226	G02
C228	C01
C229	E03
C230	F02
C232	E03
C233	E02
C234	G02
C235	F02
C237	D02
C238	B02
C240	D03
C242	E02
C243	D03
C251	B01
C252	D01
C253	D01
C254	D01
C255	D01
C256	E01
C258	E01
C259	E01
C260	E01
C261	F03
C262	F03
C263	E03
C264	E03
C265	B03
C266	B03
C267	D03
C268	E03
C269	A03
C270	G03
C271	F02
C272	F02
C273	F01
C275	F01
C278	F01
C279	F03
C280	F03
C282	E03
C283	E02
C284	G02
C285	F02
C287	D02
C288	B02
D203	F02
D204	F02
D206	E02
R204	D01
R205	C02
R206	C02
R207	C01

R208	B01
R209	C01
R210	B01
R211	C01
R212	D02
R213	D03
R214	D02
R215	C03
R216	D02
R217	E02
R218	E02
R219	D02
R220	D02
R221	D02
R222	E01
R223	D02
R224	F03
R225	F03
R226	F03
R227	F03
R228	E03
R229	C03
R230	B03
R231	B03
R232	B03
R233	B03
R234	B03
R235	C03
R236	D03
R237	G03
R238	E03
R239	E02
R240	E02
R241	G03
R242	F03
R243	G03
R244	G03
R245	G03
R246	G02
R247	F02
R250	E02
R251	B02
R254	C01
R255	C02
R256	C02
R257	C01
R258	B01
R259	C01
R260	B01
R261	C01
R263	D01

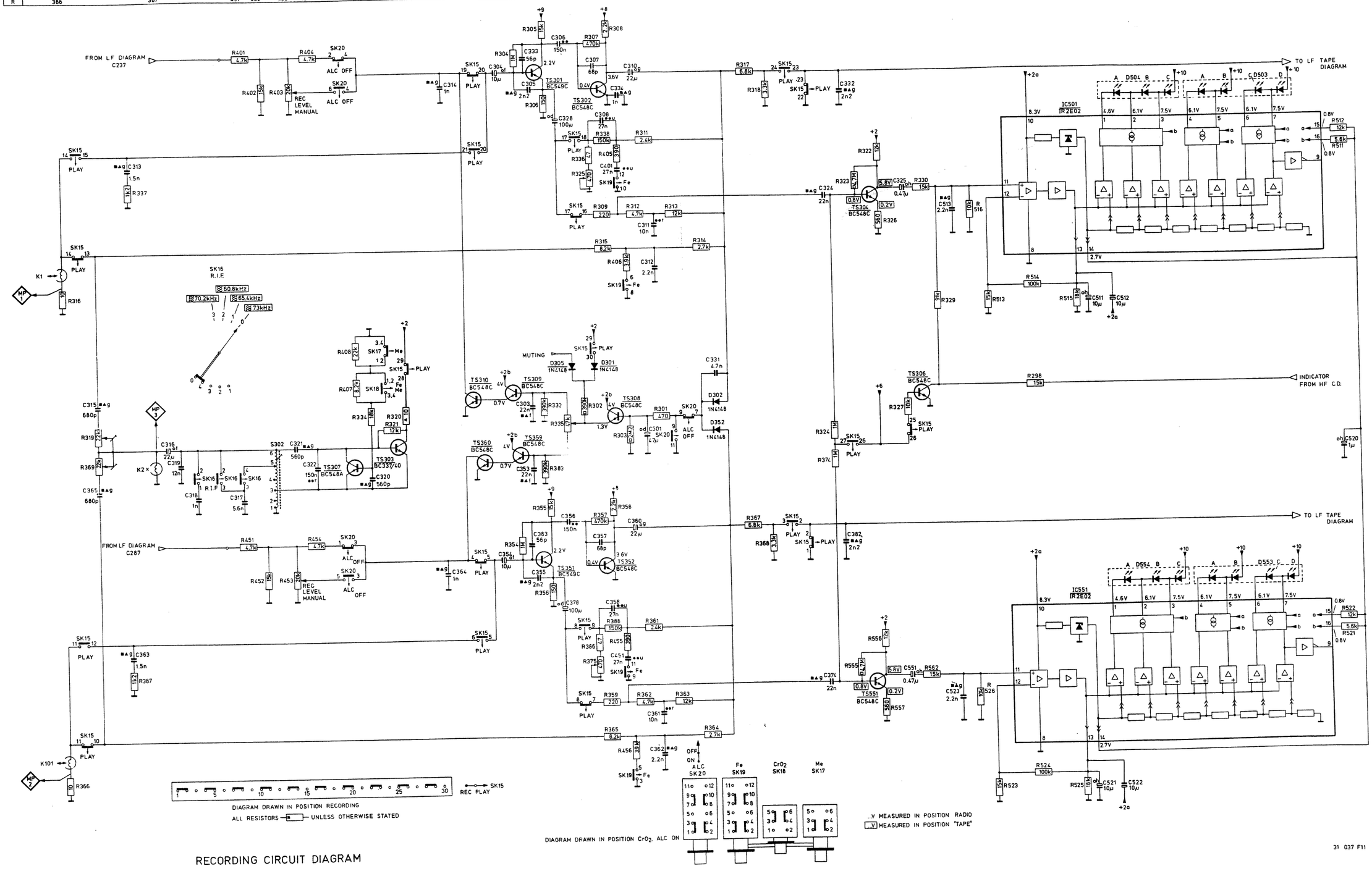
R264	D02
R265	D01
R266	E02
R267	E02
R268	E02
R269	E01
R270	E01
R271	E01
R272	E01
R273	E01
R274	F03
R275	F03
R276	F03
R277	F03
R278	E03
R279	C03
R280	B03
R281	B03
R282	B02
R283	B03
R284	B03
R285	C03
R286	E03
R288	E03
R289	F02
R290	E02
R291	F03
R292	F03
R293	G03
R294	G03
R295	G03
R296	F02
R297	F02
R298	C02
R803	F01
R804	F01
R805	F01
R806	F02
R807	F02
R808	F01
R809	F02
R810	F01
R811	F02
R812	D03
R815	E03
R820	G01
R821	B03
R865	E03
R870	F01
R871	B03
S201	C03
IC201	F02

TS203	D02
TS204	D02
TS205	B01
TS206	E03
TS209	E02
TS210	E02
TS211	E01
TS212	C03
TS213	E03
TS253	D01
TS254	E02
TS255	B01
TS256	F03
TS262	C03
TS263	E03


MIC MIX PCB
A
B
C
D
1
2
3
4
C906
R961
R962
R906
R903
R912
R907
D901
C902
R905
R913
D952
R958
D951
C905
D902
R911
D903
C907
R902
R952
C955
D953
TS901
R908
C909
C903
TS901
TS951
e=0.9V
b=1.5V
c=6.1V
C956
R904
C953
TS951
S920
R957
C959
C904
C901
R955
R953
R954
C951
R960
C954
C908
R951
R901
SK951
SK901
R910
BU951
BU901
MICROPHONE R
MICROPHONE L
MIC. MIXING
30 950 C12

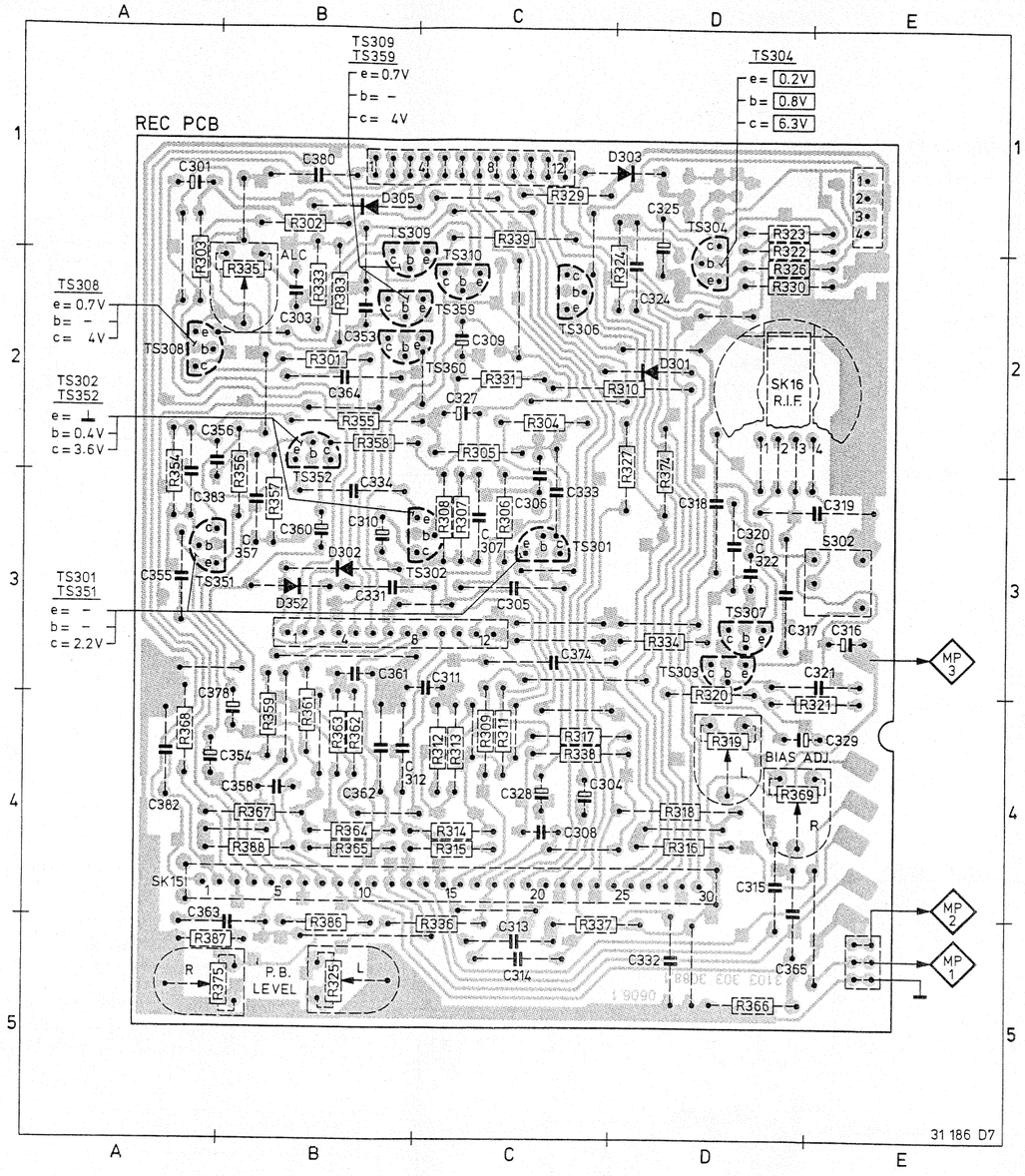

DNR PCB
A
B
C
1
2
3
R971
R920
C920
C922
R970
R921
R922
C923
TS920
e= 0V
b=0.6V
c=3.2V
C925
C921
C971
C975
TS920
C924
C974
IC 920
C929
C927
1= 9V
2=4.5V
3=4.5V
4=4.5V
5=3.5V
6=0.8V
7= ⊥
8=5.6V
9=1.3V
10=1.6V
11=4.5V
12=4.5V
13=4.5V
14=4.5V
R923
C928
R972
R925
R924
C926
C930
C931
SK920
DNR
30 953 B12

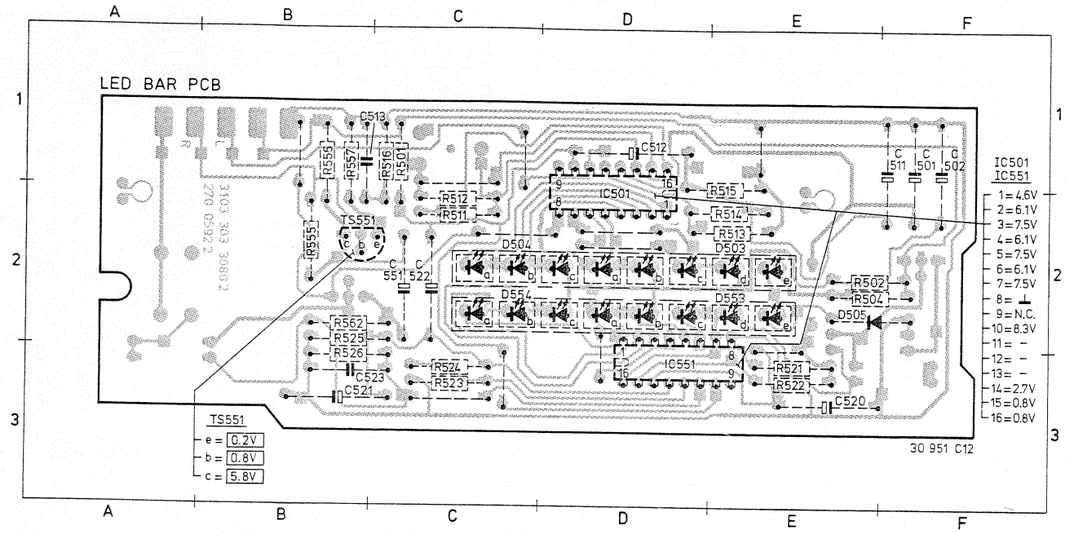
MISC	K1			SK16		S302		TS307	TS303	TS310	TS309	TS301.D305.D301	TS302	TS308	D302		TS304	TS306			IC501	D504	D503	
MISC	K101		K2							TS360	TS359	TS351	TS352		D352		TS551				IC551	D554	D553	
C		315	313	316.319.318		317	321	322	320	323	304.303.305	328.306	307.308.401.310···312.301		331		324	325	513		511	512		520
C		365	363						364		354.353.355	378.356	357.358.451.360···362				374	551	523		521	522		511 512
C											304.305.306	336.325.307···309.406.405.311···313			314	317 318		323 322.326	330 329 516	513	514	515		
R	316			337		401	402	403	404		333.383.335.302.338.315.388.365.303	301					324.374	327			298			521 522
R		319.369							408.407.334.321.320		354.355.356	386.375.357···359.456.455.361···363			364	357 368		555 556.557	562	526 523	524	525		
R	366			387		451	452	453	454															

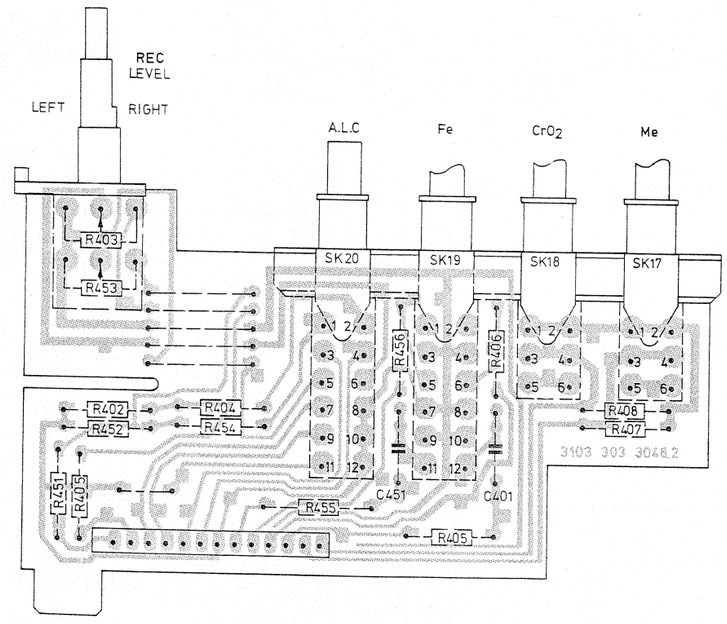


RECORDING CIRCUIT DIAGRAM

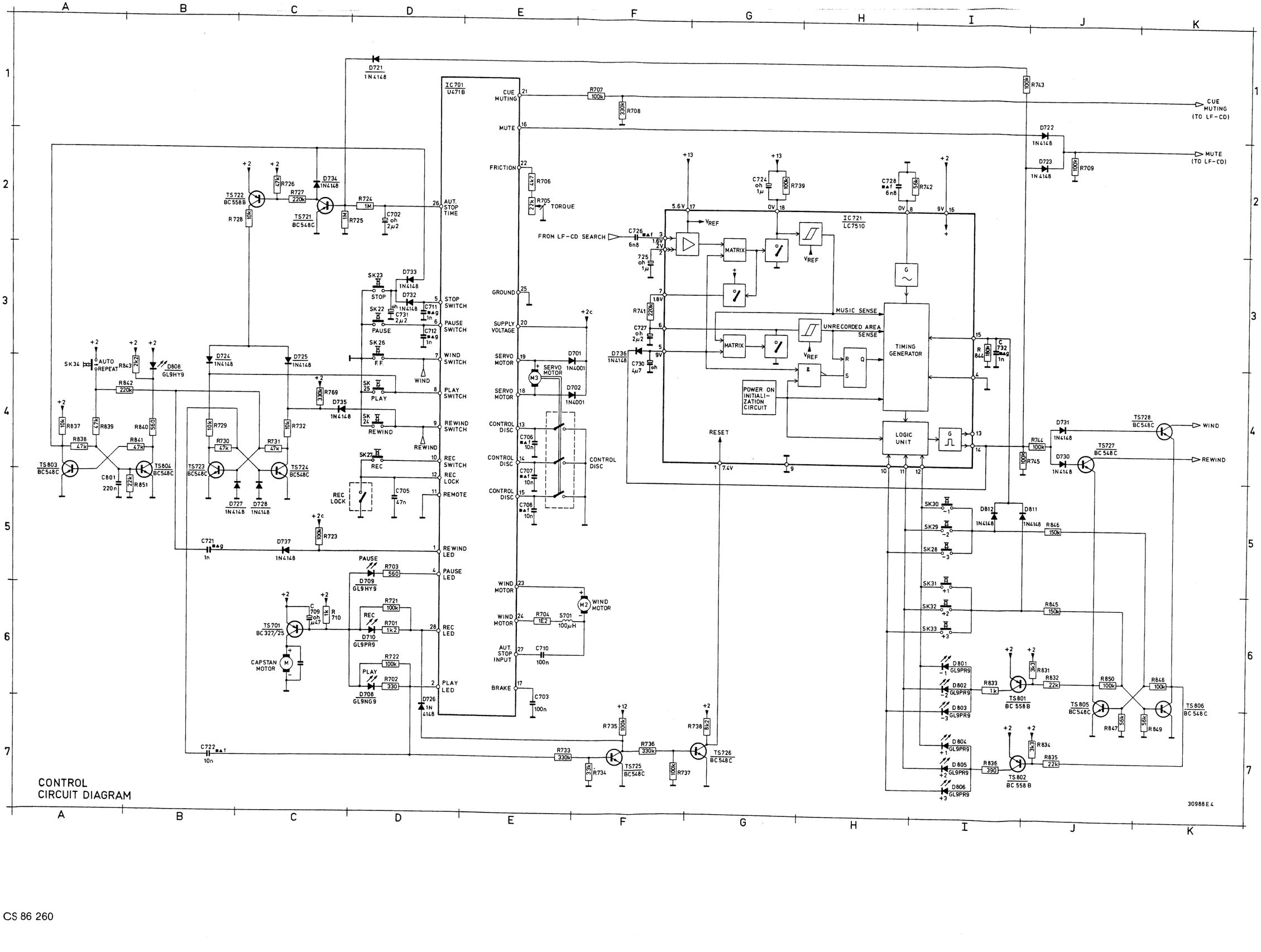
31 037 F11


REC PCB
TS309
TS359
e = 0.7V
b = –
c = 4V
TS304
e = 0.2V
b = 0.8V
c = 6.3V
TS308
e = 0.7V
b = –
c = 4V
TS302
TS352
e = ⊥
b = 0.4V
c = 3.6V
TS301
TS351
e = –
b = –
c = 2.2V
ALC
SK16
R.I.F.
BIAS ADJ.
P.B.
LEVEL
SK151
MP 3
MP 2
MP 1
31 186 D7

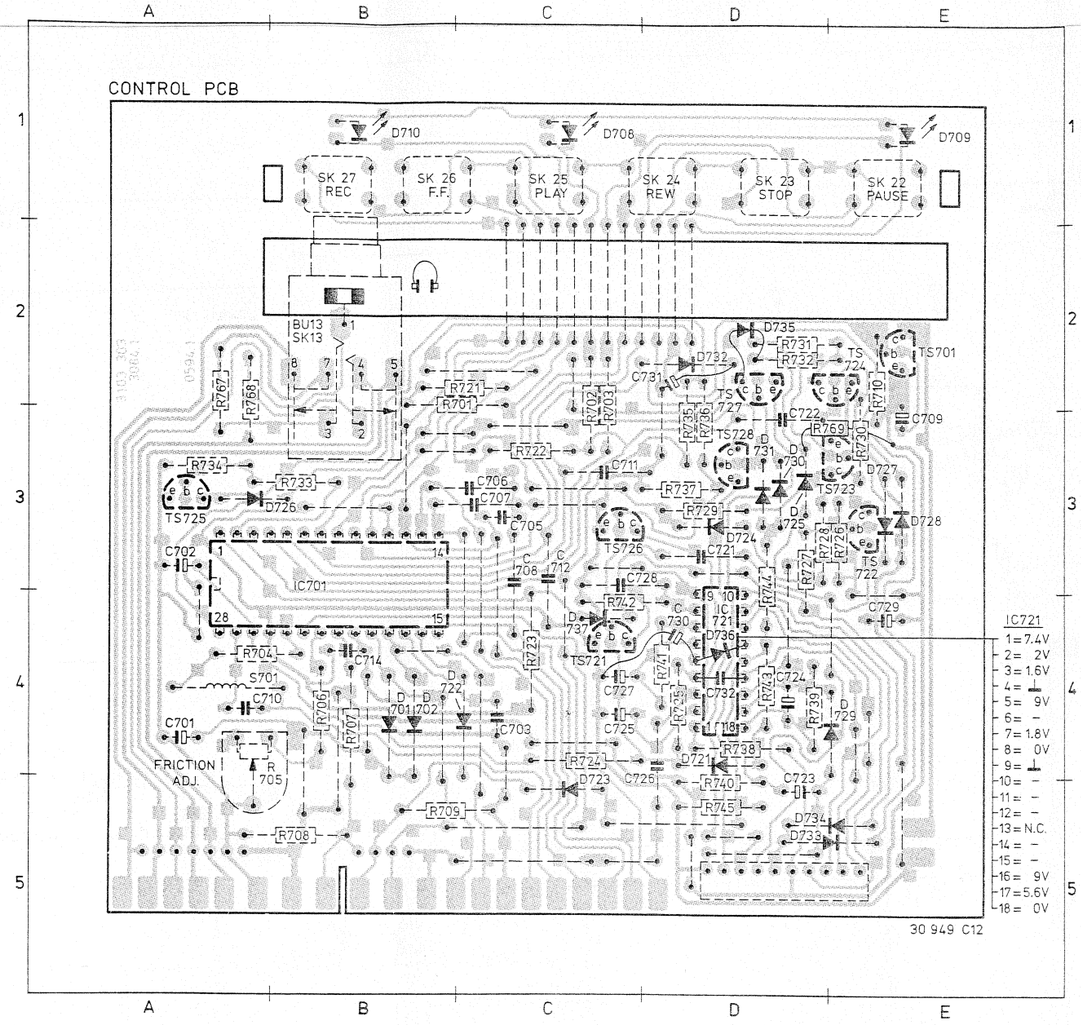

LED BAR PCB
IC501
IC551
1 = 4.6V
2 = 6.1V
3 = 7.5V
4 = 6.1V
5 = 7.5V
6 = 6.1V
7 = 7.5V
8 = ⊥
9 = N.C.
10 = 8.3V
11 = –
12 = –
13 = –
14 = 2.7V
15 = 0.8V
16 = 0.8V
TS551
e = 0.2V
b = 0.8V
c = 5.8V
30 951 C12

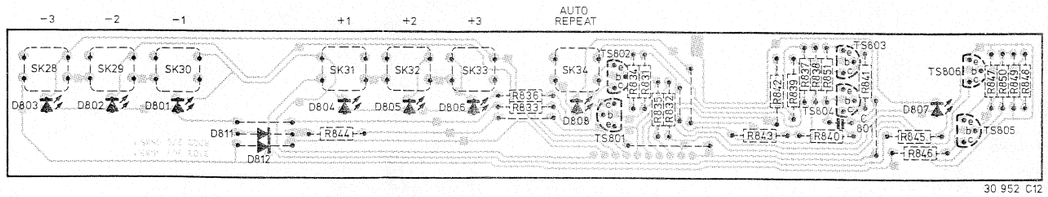

REC
LEVEL
LEFT
RIGHT
A.L.C
Fe
CrO2
Me
SK20
SK19
SK18
SK17
27 353 C13

CONTROL CIRCUIT DIAGRAM



CS 86 260





Adjustment	Cassette	Recorder in position	Apply signal to	Measure on	Read on	Adjust with	Adjust to
Play back speed	3150 Hz of SBC126Cr	PLAY SK18-Cr	—	BU9 (BU8)	Wow- and flutter meter	R-capstan motor M1	*a
Azimuth R/P head	10 kHz of SBC126Cr	PLAY SK18-Cr	—	BU9 (BU8)	mV-meter	Left screw R/PB head	Max. output Outp. L≈ output R
Erase oscillator frequency	—	REC SK18-Cr ◯ R403 R453 SK16 "0"	—	MP-3	Frequency counter	S302	73 kHz ± 200 Hz
BIAS	—	REC SK18-Cr ◯ R403 R453 SK16 "0"	—	MP-1 MP-2	mV-meter	R319 R369	6 mV ± 1.5 dB
Playback sensitivity	315 Hz 0 dB of SBC126Cr	TAPE PLAY	—	BU9 (BU8)	mV-meter (indicators full scale)	R325 R375	650 mV L/R ± 2 dB
ALC	Side 2 SBC126Cr	AUX. A.L.C. REC SK18-Cr	BU7/BU6 330 Hz ≈ 700 mV	—	Indicators	R335	signal strength L = signal strength R

a* The maximum permissible speed deviation is 2%. Moreover, the wow-and-flutter value can be read. This value should not exceed 0.3%.

IC701 Pin	Function →	Stop	Pause	Play	Rec+Pause	Rec+Play	FF	Cue	Rewind	Review
	Servo position →	Stop	Pause	Play	Rec+Pause	Rec+Play	Stop	Pause	Stop	Pause
13		L	L	L	L	H	L	L	L	L
14		H	H	L	L	L	H	L	H	H
15		H	L	H	H	H	H	H	H	H

TABLE: OUTPUT LEVELS U471B

Function	Servo position	Outputs										
		Leds rec	Leds play	Leds pause	mute	servo-	motor	cue	Play tape-tension	winding-motor		
		28	2	4	16	18	19	21	22	23	24	pin #
Stop	Stop	H	H	H	H			L	L	L	L	
Pause	Pause	H	H	L	L			L	L	L	L	
Play	Play	H	L	H	L			L	H*	H**	L	
Rec+Pause	Rec+Pause	L	H	L	L			L	L	L	L	
Rec+Play	Rec+Play	L	L	H	L			L	H*	H**	L	
FF	Stop	H	H	H	H			L	L	H	L	
Cue	Pause	H	H	H	H			H	L	H	L	
Rewind	Stop	H	H	H	H			L	L	L	H	
Review	Pause	H	L	H	L			H	L	L	H	
Servo motor moves up					H	L	H					
Servo motor moves down					H	H	L					

*, ** adjustable with R705

H* nominal 1,7 V
H** nominal 2,5 V

WIRING B

ITEM	PCB
BU13	I01
C301	M01
C303	M01
C304	L03
C305	L02
C306	L02
C308	L03
C309	L01
C310	L02
C311	L02
C312	L03
C313	L03
C314	L03
C315	K03
C316	K02
C317	K02
C318	K02
C319	K02
C320	K02
C321	K02
C322	K02
C323	K03
C324	K01
C325	K01
C327	L01
C328	L03
C331	L02
C332	K03
C333	L02
C334	L02
C353	L01
C354	M03
C355	M02
C356	M02
C357	M02
C358	M03
C360	M02
C361	L02
C362	L03
C363	M03
C364	M02
C365	K03
C374	L02
C378	M02
C380	M01
C382	M03
C383	M02
C401	005
C451	N05
C601	002
C602	002
C603	002
C604	002
C701	I03
C702	I02
C703	H03
C705	H02
C706	H02
C707	H02
C708	H02
C709	G02
C710	I03
C711	H02
C712	H02
C714	H03
C721	G02
C722	G02
C723	G03
C724	G03
C725	H03
C726	G03
C727	H03
C728	H02
C729	G02
C730	G03
C731	G02
C732	G03
C801	G06
C901	B02
C902	C01
C903	B02
C904	C02
C905	C02
C906	C01
C907	C02
C909	C02
C920	B05
C921	C05
C922	C05
C923	B05
C924	C06
C925	C05
C926	A06
C927	B06
C928	B06
C929	C06
C930	B06
C931	B06
C951	B02
C953	B02
C954	C02
C955	D02
C956	C02
C959	C02
C971	B06
C974	B06
C975	B06
D301	K01
D302	L02
D303	L01
D305	L01
D352	M02
D601	002
D602	P02
D701	H03
D702	H03
D708	H01
D709	G01
D710	I01
D721	G03
D722	H03
D723	H03
D724	G02
D725	G02
D726	I02
D727	G02
D728	G02
D729	G03
D730	G02
D731	G02
D732	G02
D733	G03
D734	G03
D735	G01
D736	G03
D737	H02
D801	J06
D802	K06
D803	K06
D804	J06
D805	I06
D806	I06
D807	G06
D808	I06
D811	J06
D812	J06
D901	C02
D902	C02
D903	C02
D951	D02
D952	D02
D953	D02
D960	E06
F601	002
R301	M01
R302	M01
R303	M01
R304	L02
R305	L02
R306	L02
R307	L02
R308	L02
R309	L03
R310	L01
R311	L03
R312	L03
R313	L03
R314	L03
R315	L03
R316	K03
R317	L03
R318	K03
R319	K03
R320	K02
R321	K02
R322	K01
R323	K01
R324	L01
R325	M03
R326	K01
R327	L02
R329	L01
R330	K01
R331	L01
R333	M01
R334	K02
R335	M01
R336	L03
R337	L03
R338	L03
R339	L01
R354	M02
R355	L02
R356	M02
R357	M02
R358	L02
R359	M03
R361	M03
R362	L03
R363	M03
R364	L03
R365	L03
R366	K04
R367	M03
R368	M03
R369	K03
R374	K02
R375	M03
R383	M01
R386	M03
R387	M03
R388	M03
R401	M05
R402	M05
R403	M06
R404	N05
R405	005
R407	005
R408	005
R451	M05
R452	M05
R453	M06
R454	N05
R455	N05
R456	N06
R701	H02
R702	H02
R703	H02
R704	I03
R705	I03
R706	I03
R707	I03
R708	I03
R709	H03
R710	G02
R721	H02
R722	H02
R723	H03
R724	H03
R725	G03
R726	G02
R727	G02
R728	G02
R729	G02
R730	G02
R731	G01
R732	G02
R733	I02
R734	I02
R735	G02
R736	G02
R737	G02
R738	G03
R739	G03
R740	G03
R741	G03
R742	H02
R743	G03
R744	G02
R745	G03
R765	I02
R767	I02
R769	G02
R801	H06
R802	H06
R803	I06
R804	H06
R805	H06
R806	I06
R807	H06
R808	H06
R809	H06
R810	H06
R811	G06
R812	H06
R813	H06
R814	J06
R815	G06
R816	G06
R817	G06
R818	G06
R819	G06
R820	G06
R821	H06
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R912	C01
R913	B02
R915	B02
R920	C05
R921	B05
R922	B05
R923	B06
R924	B06
R925	C06
R951	B03
R953	C02
R954	C02
R956	C02
R95?	C02
R958	D02
R960	D02
R961	D01
R962	D01
R970	B05
R971	B05
R972	C06
S302	K02
S701	I03
S920	D02
SK13	I01
SK15	M03
SK16	K01
SK20	N06
SK22	G01
SK23	G01
SK24	G01
SK25	H01
SK26	H01
SK27	I01
SK28	K06
SK29	K06
SK30	J06
SK31	J06
SK32	I06
SK33	I06
SK34	I06
BU901	C03
BU951	D03
IC701	I02
IC721	G03
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SK901	C03
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SK951	D03
TS301	L02
TS302	L02
TS303	K02
TS304	K01
TS306	L01
TS307	K02
TS308	M01
TS309	L01
TS310	L01
TS351	M02
TS352	M02
TS359	L01
TS360	L01
TS701	G01
TS721	H03
TS722	G02
TS723	G02
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TS727	G02
TS728	G02
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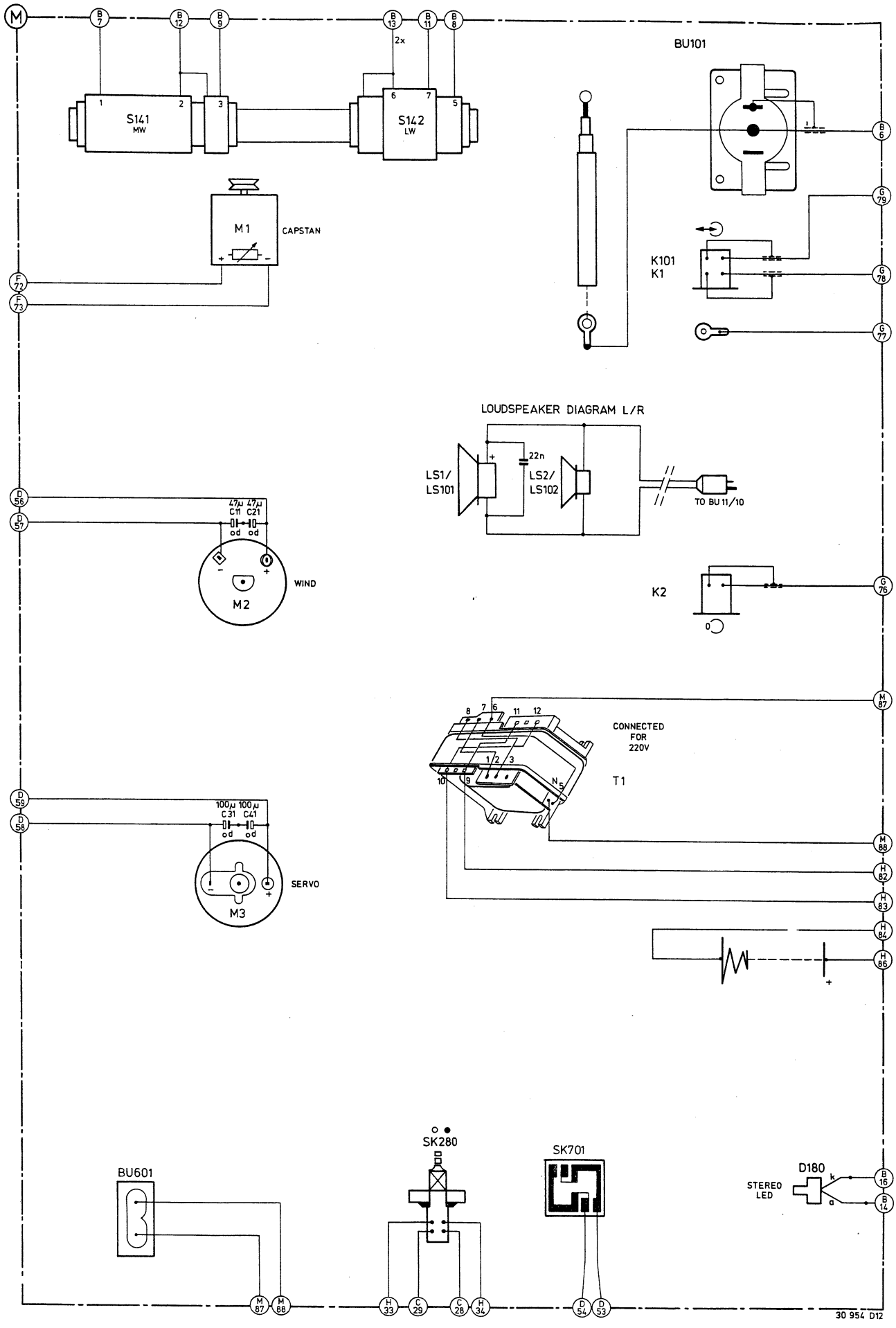
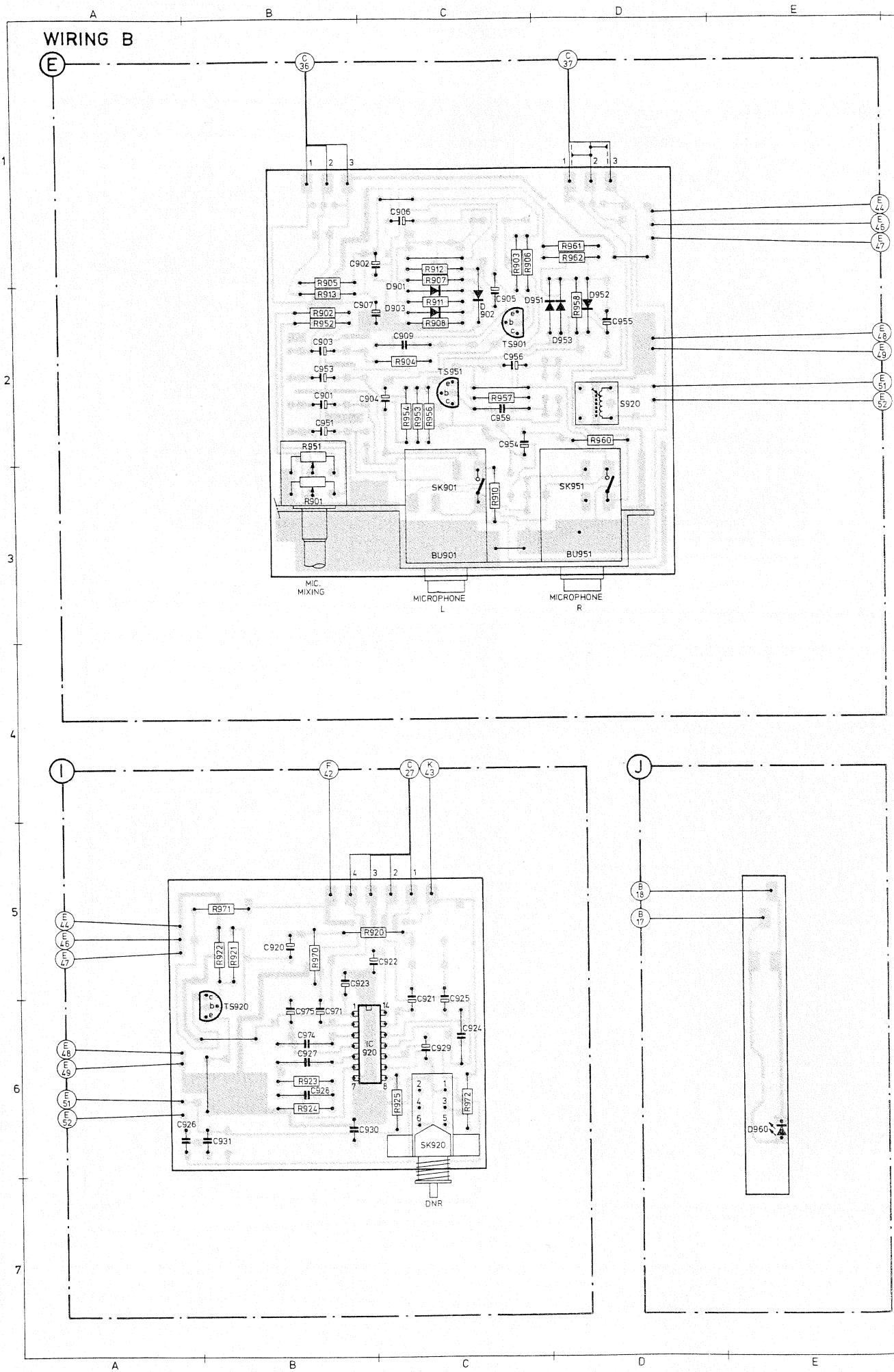
TS920	B06
TS951	C02


BU101
S141
MW
S142
LW
2x
M1
CAPSTAN
K101
K1
LOUDSPEAKER DIAGRAM L/R
LS1/
LS101
LS2/
LS102
22n
TO BU 11/10
47µ 47µ
C11 C21
M2
WIND
K2
CONNECTED
FOR
220V
T1
100µ 100µ
C31 C41
M3
SERVO
BU601
SK280
SK701
D180
STEREO
LED
30 954 D12

WIRING B


A
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C
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E
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6
7
E
I
J
C 36
C 37
F 42
C 27
K 43
B 18
B 17
E 44
E 46
E 47
E 48
E 49
E 51
E 52
C906
C902
R912
R907
R911
R908
R905
R913
R902
R952
C907
D901
D903
C909
R904
C903
C953
C901
C904
C951
R951
R901
R954
R953
R956
TS951
R903
R906
R961
R962
D902
C905
D951
D952
R958
C955
TS901
D953
C956
R957
C959
S920
C954
R960
SK901
R910
SK951
BU901
BU951
MIC. MIXING
MICROPHONE L
MICROPHONE R
R971
R922
R921
C920
R970
R920
C922
C923
TS920
C975
C971
IC 920
C921
C925
C924
C974
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C926
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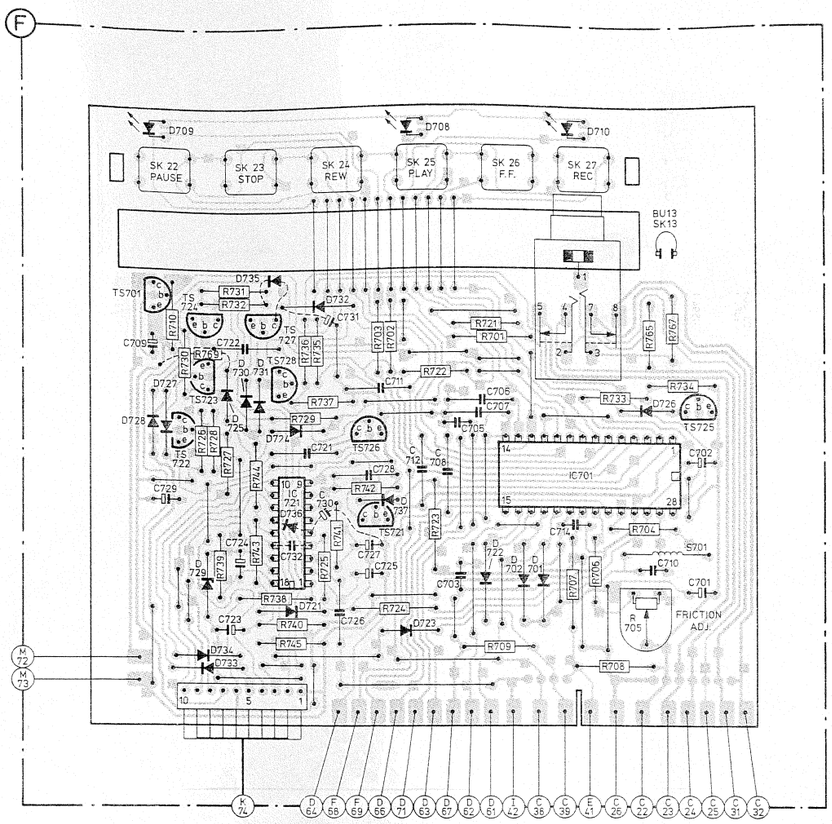
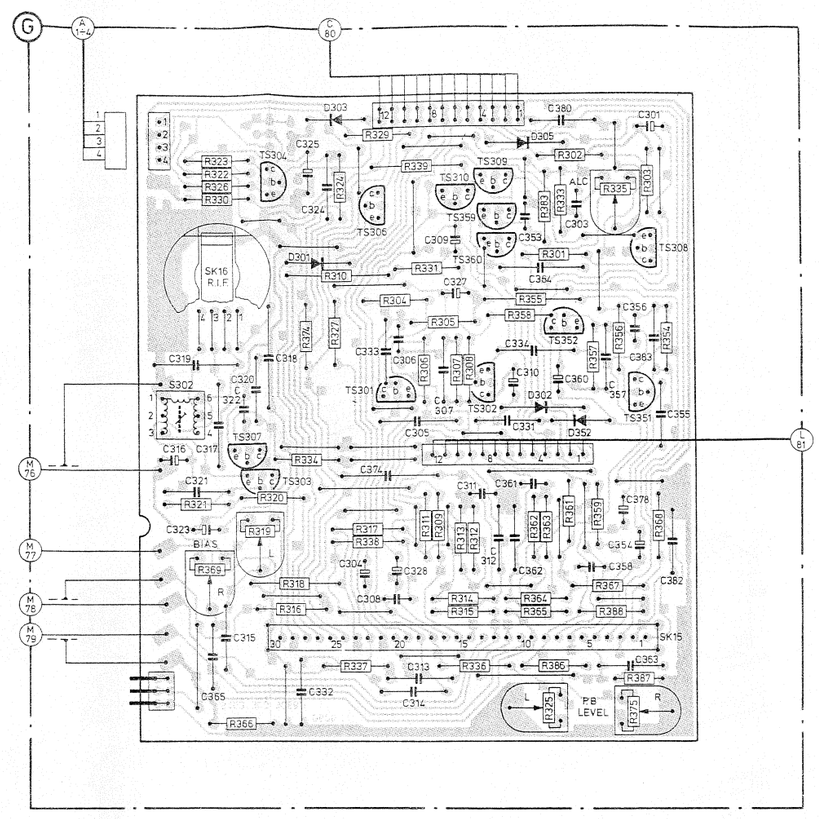
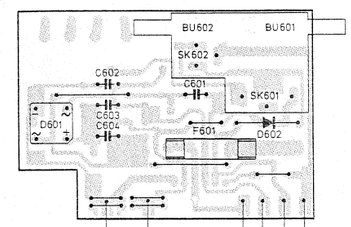
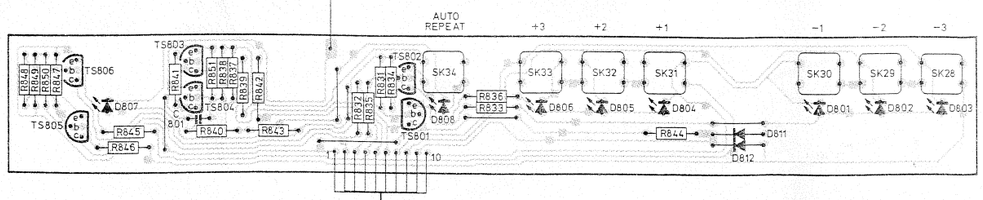
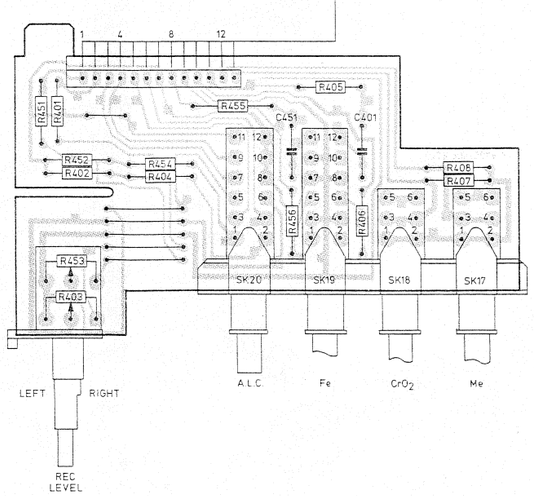
SK920
DNR
D960











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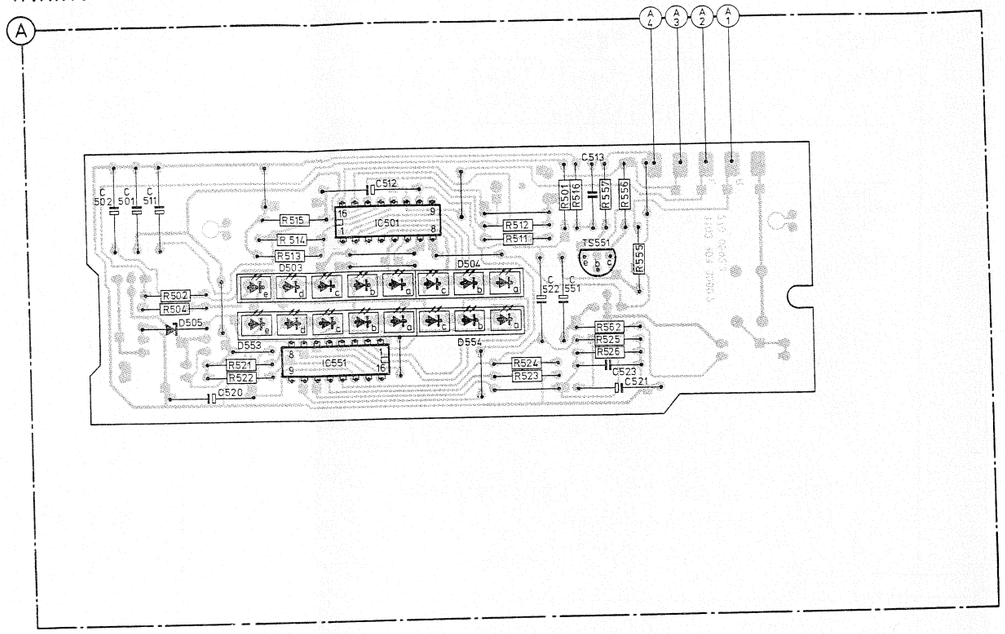
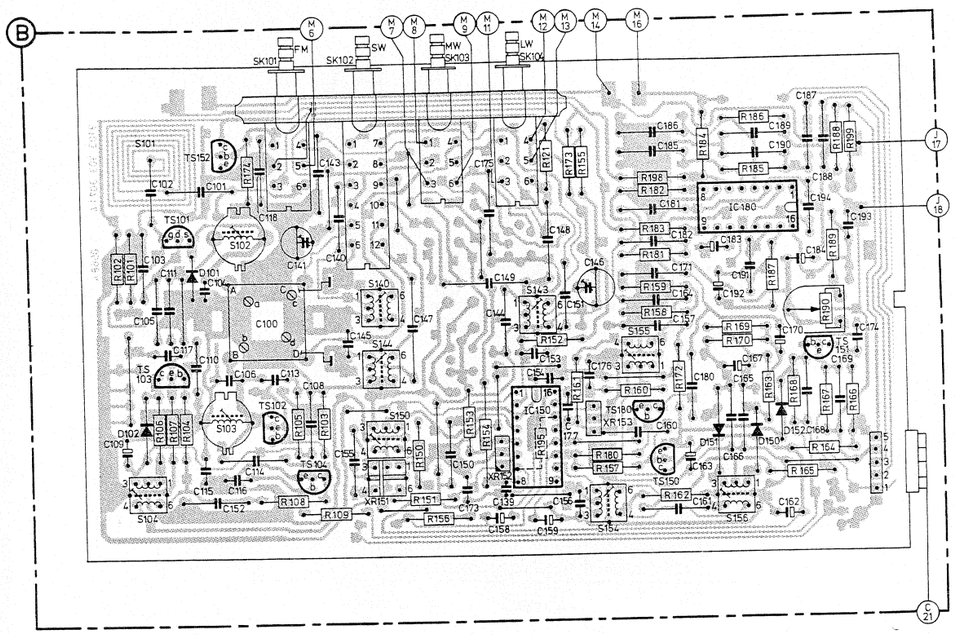
CS 86 263

WIRING A


A
C513
C512
IC501
R515
R514
R513
D503
D504
R502
R504
D505
D553
IC551
R521
R522
C520
R512
R511
R501
R516
R517
R558
TS551
R559
C522
C551
R562
R525
R526
R524
R523
C523
C521


B
SK101 FM
SK102 SW
SK103 MW
SK104 LW
S101
TS152
TS101
S102
S103
S104
TS102
TS103
TS104
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C101
C102
C103
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IC150
IC180
XR151
XR152
XR153
XR154
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TS150
TS180
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D152
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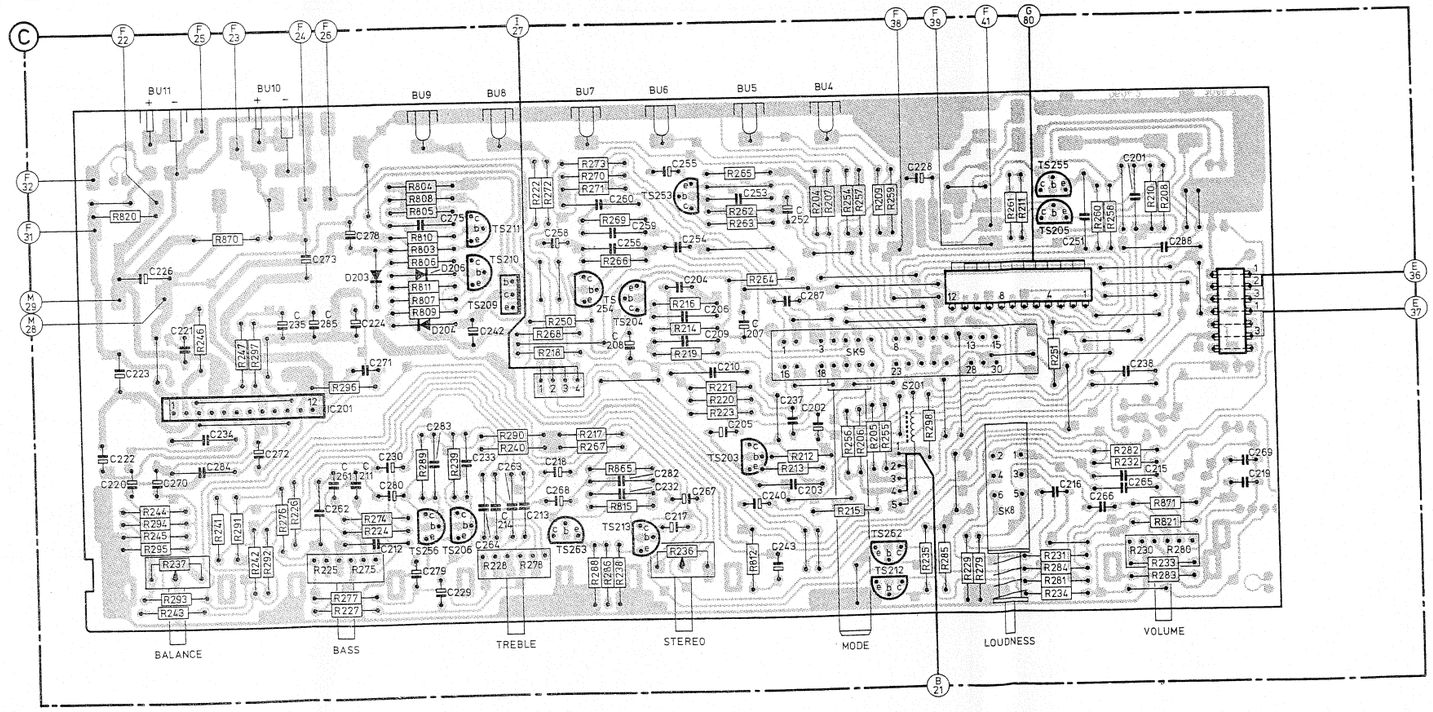
R198


C
BU11
BU10
BU9
BU8
BU7
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BU5
BU4
TS211
TS210
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TS201
TS256
TS254
TS253
TS255
TS263
TS213
TS212
IC201
SK9
SK8
S201
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R612
R615
R804
R805
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R808
R809
R810
R811
R815
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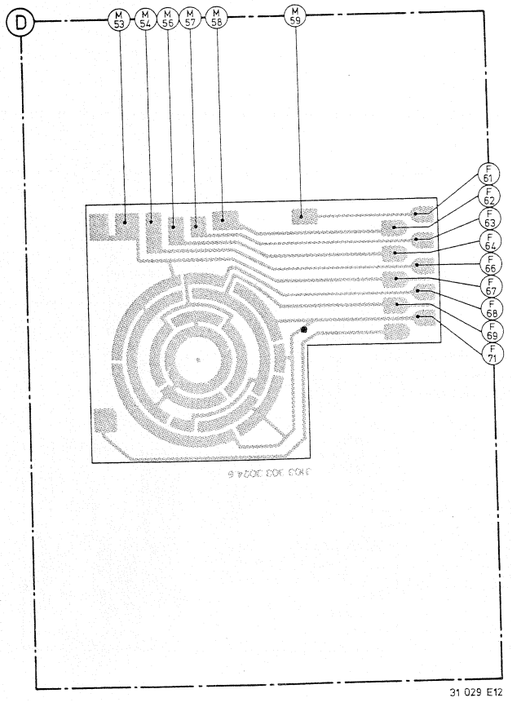
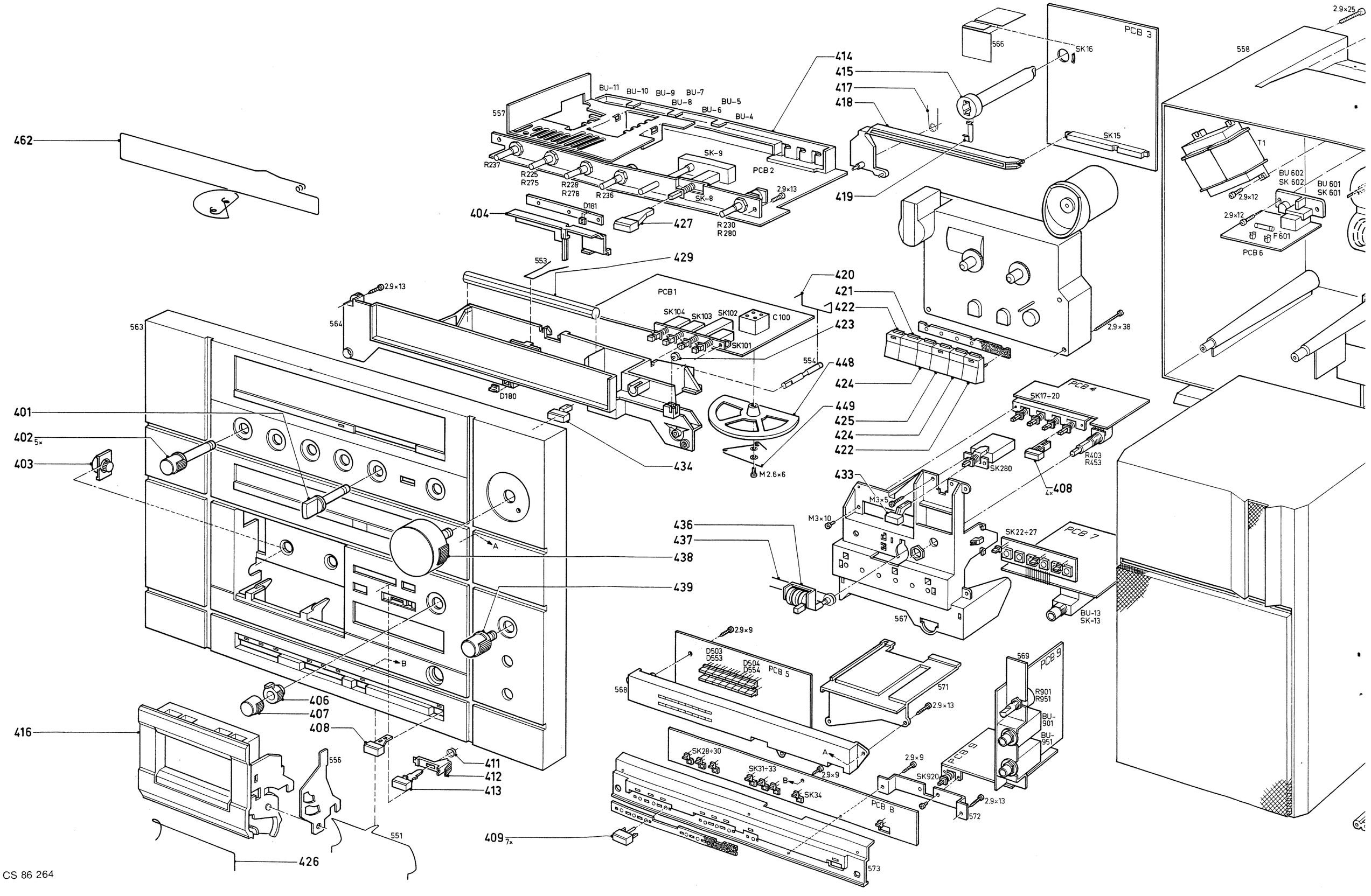
R865
R870
R871
BALANCE
BASS
TREBLE
STEREO
MODE
LOUDNESS
VOLUME


D
31 029 E12


462
401
402 5×
403
404
406
407
408
409 7×
411
412
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423
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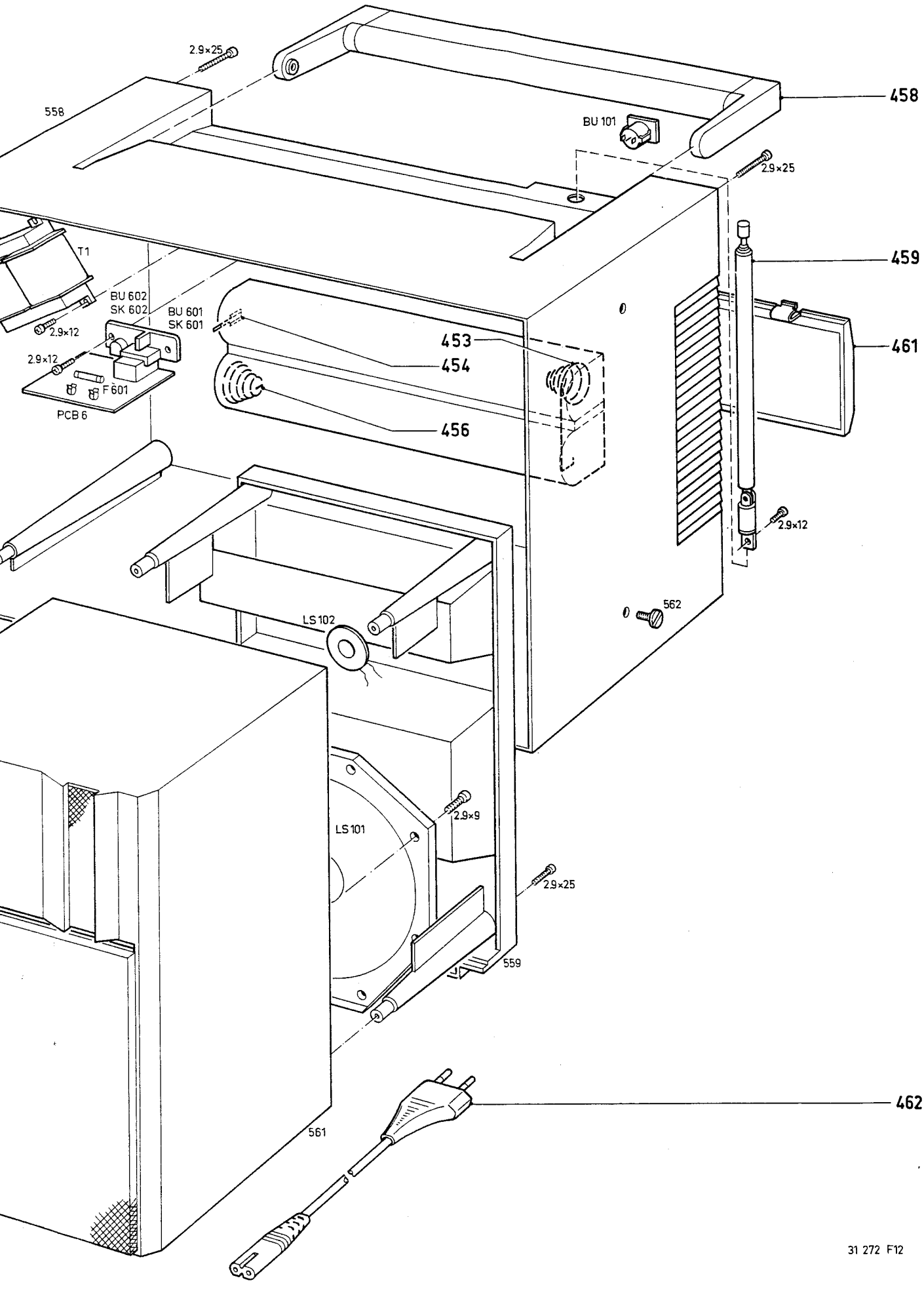
426
BU-11
BU-10
BU-9
BU-7
BU-8
BU-6
BU-5
BU-4
SK-9
SK-8
PCB 2
R237
R225
R275
R228
R278
R 236
R 230
R 280
D181
2.9×13
PCB1
SK104
SK103
SK102
C 100
SK101
D180
M 2.6×6
PCB 3
SK16
SK15
2.9×25
T1
BU 602
SK 602
BU 601
SK 601
2.9×12
F 601
PCB 6
2.9×38
PCB 4
SK17÷20
SK280
R403
R453
4×
M3×5
M3×10
SK22÷27
PCB 7
BU-13
SK-13
2.9×9
D503
D553
D504
D554
PCB 5
SK28÷30
SK31÷33
SK34
PCB 8
SK920
R901
R951
BU-
901
BU-
951
PCB 9
A
B

CS 86 264


2.9×25
558
458
BU 101
2.9×25
T1
459
BU 602
SK 602
BU 601
SK 601
2.9×12
461
453
2.9×12
454
F 601
PCB 6
456
2.9×12
562
LS 102
LS 101
2.9×9
2.9×25
559
462
561

31 272 F12

-R-

R190	Trimpot 10K	4822 100 10035
R225	Potm. bass R225/275	4822 100 20105
R228	Potm. treble R228/278	4822 100 20105
R230	Potm. vol R230/280	4822 100 20104
R236	Potm stereo control	4822 101 20683
R237	Potm. balance	4822 100 20103
R246	NFR25 2E2 0.33 W	4822 111 30492
R296	NFR25 2E2 0.33 W	4822 111 30492
R319	22K Carb lin 0.1 W	4822 100 10051
R325	470E Carb lin 0.1 W	4822 100 10038
R335	47K Carb lin 0.1 W	4822 100 10079
R369	22K Carb lin 0.1 W	4822 100 10051
R375	470E Carb lin 0.1 W	4822 100 10038
R403	R403/453 REC MAN	4822 100 30035
R502	NFR25 4E7 0.33 W	4822 111 30499
R705	22K Carb lin 0.1 W	4822 100 10051
R901		4822 100 20097

-C-

	Tub. cer. cap 47P 50 V	4822 122 10181
	Tub. cer. cap 100P 50 V	4822 122 10183
	Tub. cer. cap 470P 50 V	4822 122 31435
	Tub. cer. cap 22N 16 V	4822 122 10166
	Tub. cer. cap 100N 12 V	4822 122 10207
	Tub. cer. cap 47N 25 V	4822 122 31817
	Tub. cer. cap 68P 50 V	4822 122 31814
	Tub. cer. cap 560P 50 V	4822 122 31693
	Tub. cer. cap 56P 50 V	4822 122 31813
C100	Varco	4822 125 50134
C141	Trimcap 1.8-22P	4822 125 50045
C144	Tub. cer. cap 15P 50V	4822 122 31812
C146	Trimcap 1.8-22P	4822 125 50045
C148	PS. cap 340P 630 V	4822 121 50615

-S-

S102		4822 158 10515
S103		4822 158 10515
S104		4822 153 50206
S140	Coil SW	4822 156 30811
S141	Coil MW ferrite bar	4822 156 10685
S142	Coil LW ferrite bar	4822 156 10691
S143	Coil MW osc.	4822 156 10687
S144	Coil SW osc.	4822 156 10689
S150	IF coil AM	4822 156 10688
XR151	Cer. filter 468 kHz	4822 242 70275
XR152	Cer. filter 10.7 MHz	4822 242 70249
XR153	Cer. filter 10.7 MHz	4822 242 70249
S154	IF coil FM	4822 156 10686
S155	IF coil AM	4822 156 10726
S156	Coil FM	4822 157 51184
S201	680 μH	4822 157 50968
S302	Erase oscillator	4822 156 50026
S701		4822 157 51372
S920		4822 156 10451

-SK-

SK8	Loudness switch	4822 276 10897
SK9	Mode switch	4822 273 10095
SK15	REC/PLAY switch	4822 276 10945
SK17	Tape sel. SK17-19	4822 276 40281
SK22	SK22-27	4822 277 30683

-SK-

SK23÷34		4822 277 30683
SK280	Power switch	4822 276 11061
SK101	SK101-104	4822 276 40287
SK920	DNR switch	4822 276 10898

-D-

	OA95	4822 130 30191
D601	S2VB200V	4822 130 30993
	1N4001G	4822 130 31438
	1N4148	4822 130 30621
D206	BZX79-B4V7	4822 130 34174
D729	BZX79-B5V6	4822 130 34173
D808	GL9HY9	4822 130 31468
D180	GL9NG9	4822 130 31433
	GL9PR9	4822 130 31432
D960	LN25RP	4822 130 31923
D504	3x red	4822 130 31469
D554	3x red	4822 130 31469
D503	5x green	4822 130 32056
D553	5x green	4822 130 32056

-TS-

	BC337-40	4822 130 41344
	BC548	4822 130 40938
	BC548A	4822 130 40948
	BC548B	4822 130 40937
	BC548C	4822 130 44196
	BC549	4822 130 40964
	BC550C	4822 130 41096
	BC558	4822 130 40941
	BC558B	4822 130 44197
	BD234 = BD238	4822 130 40917
	BF495D	4822 130 41498
	2SK168E	4822 130 41943
	BC327/25	4822 130 41246

-IC-

IC180	AN7410	4822 209 80683
IC201	AN7166	4822 209 81503
IC501	IR-2E02	4822 209 80943
IC551	IR-2E02	4822 209 80943
IC721	LC7510	4822 209 81502
IC920	LM1894N	4822 209 81501
IC150	TEA5570/3	4822 209 81503
IC701	U471B	4822 209 81415

-Miscellaneous-

BU013	Headphone socket	4822 267 30385
BU101	Aerial socket	4822 267 30384
BU601	Mains/DC socket	4822 267 30461
BU951	MIC socket	4822 267 20222
F601	T2A	4822 253 30025
LS001	AD70850/X4W	4822 240 50179
LS002	Piezo tweeter	4822 280 10135
LS101	AD70850/X4W	4822 240 50179
LS102	Piezo tweeter	4822 280 10135
T001	Transformer	4822 146 20772
	Scale self adhesive	4822 333 30142
	Fuse holder	4822 492 62373
	Selftap screw 2.9x38	4822 502 30235

WIRING A

ITEM	PCB
BU4	D04
BU5	D04
BU6	D04
BU7	C04
BU8	C04
BU9	C04
SK9	D05
C100	F02
C101	F01
C102	F01
C103	F02
C104	F02
C105	F02
C106	F02
C108	F02
C109	F02
C110	F02
C111	F02
C113	F02
C114	F02
C115	F02
C116	F02
C117	F02
C118	F01
C139	G03
C140	G02
C141	F02
C143	G01
C144	G02
C145	G02
C146	H02
C147	G02
C148	G02
C149	G02
C150	G02
C151	H02
C152	F03
C153	G02
C154	G02
C155	G02
C156	H03
C157	H02
C158	G03
C159	G03
C160	H02
C161	H03
C162	H03
C163	H02
C164	H02
C165	H02
C166	H02
C167	H02
C168	I02
C169	I02
C170	H02
C171	H02
C173	G03
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C176	H02
C177	H02
C180	H02
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C182	H02
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C190	H01
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C212	B05
C213	C05
C214	C05
C215	E05
C216	E05
C217	D05
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C219	F05
C220	A05
C222	A05
C223	A05
C224	B04
C226	A04
C229	C06
C230	B05
C231	B04
C232	C05
C233	C05
C234	B05
C235	B04
C237	D05
C238	E05
C240	D05
C242	C04
C243	D05
C251	E04
C252	D04
C253	D04
C255	D04
C256	C04
C258	C04
C260	C04
C261	B05
C262	B05
C263	C05
C264	C05
C265	E05
C266	E05
C267	D05
C268	C05
C269	F05
C270	A05
C271	B05
C272	B05
C273	B04
C275	C04
C276	B04
C279	C05
C280	B05
C282	C05
C283	C05
C284	B05
C285	B04
C287	D04
C288	F04
C501	A01
C502	A01
C511	A01
C512	B01
C513	C01
C520	B02
C521	C02
C522	C02
C523	C02
C551	C02
D101	F02
D102	F02
D150	H02
D151	H02
D152	H02
D203	B04
D204	C04
D206	C04
D503	B02
D504	C02
D505	B02
D553	B02
D554	C02
R101	F02
R102	F02
R104	F02
R105	F02
R106	F02
R107	F02
R108	F03
R109	G03
R121	G01
R150	G02
R151	G03
R152	G02
R153	G02
R154	G02
R155	H01
R156	G03
R157	H02
R158	H02
R159	H02
R160	H02
R161	H02
R162	H03
R163	H02
R164	I02
R165	H02
R166	I02
R167	I02
R168	H02
R169	H02
R170	H02
R172	H02
R173	H01
R174	F01
R180	H02
R181	H02
R182	H01
R183	H01
R184	H01
R185	H01
R186	H01
R187	H02
R188	I01
R189	I02
R190	I02
R195	G02
R198	H01
R199	I01
R204	D04
R205	D05
R206	D05
R207	D04
R208	F04
R209	D04
R210	F04
R211	E04
R212	D05
R213	D05
R214	D05
R215	D05
R216	D04
R217	C05
R218	C05
R219	D05
R220	D05
R221	D05
R222	C04
R223	D05
R224	B05
R225	B05
R226	B05
R227	B06
R228	C05
R229	E06
R230	F05
R231	E05
R232	E05
R233	F06
R234	E06
R235	E05
R236	D05
R237	B05
R238	C06
R239	C05
R240	C05
R241	B05
R242	B05
R243	B06
R244	A05
R245	A05
R246	B05
R247	B05
R250	C04
R251	E05
R254	D04
R255	D05
R256	D05
R257	D04
R258	E04
R259	D04
R259	C04
B260	E04
R261	E04
R262	D04
R263	D04
R264	D04
R265	D04
R266	C04
R267	C05
R268	C05
R269	C04
R270	C04
R271	C04
R272	C04
R273	C04
R274	B05
R275	B05
R276	B05
R277	B06
R278	C05
R279	E06
R280	F05
R281	E06
R282	E05
R283	F06
R284	E06
R285	E05
R286	C06
R288	C06
R289	C05
R290	C05
R291	B05
R292	B05
R293	B06
R294	A05
R295	A05
R296	B05
R297	B05
R298	E05
R501	C01
R502	B02
R504	B02
R511	C02
R512	C01
R513	B02
R514	B01
R515	B01
R516	C01
R521	B02
R522	B02
R523	C02
R524	C02
R525	C02
R526	C02
R555	C02
R556	C01
R557	C01
R562	C02
R803	C04
R804	C04
R805	C04
R806	C04
R807	C04
R808	C04
R809	C04
R810	C04
R811	C04
R812	D05
R815	C05
R820	A04
R821	F05
R865	C05
R870	B04
R871	F05
S101	F01
S102	F02
S103	F02
S104	F03
S140	G02
S143	G02
S144	G02
S150	G02
S154	H03
S155	H02
S156	H03
S201	E05
IC150	G02
IC180	H01
IC501	B01
IC551	B02
SK101	F01
SK102	G01
SK103	G01
SK104	G01
TS101	F01
TS102	F02
TS103	F02
TS104	F02
TS150	H02
TS151	I02
TS152	F01
TS180	H02
TS203	D05
TS204	C04
TS205	E04
TS206	C05
TS209	C04
TS210	C04
TS211	C04
TS212	D06
TS213	C05
TS253	D04
TS254	C04
TS255	E04
TS256	C05
TS262	D05
TS263	C05
TS551	C02
XR151	G03
XR152	G02
XR153	H02

401	4822 413 31111
402	4822 413 31112
403	4822 535 70618
404	4822 450 80847
4065	4822 413 41128
407	4822 413 41127
408	4822 410 22923
409	4822 410 22928
411	4822 492 51524
412	4822 403 51901
413	4822 410 22927
414	4822 267 50349
415	4822 413 41117
416	4822 443 61079
417	4822 492 40921
418	4822 403 51506
419	4822 492 62247
420	4822 492 62515
421	4822 410 22848
422	4822 410 22845

423	4822 528 50116
424	4822 410 22846
425	4822 410 22847
426	4822 492 62795
427	4822 410 22926
429	4822 526 10182
433	4822 410 22925
434	4822 410 22875
436	4822 349 50136
437	4822 358 30138
438	4822 413 51216
439	4822 413 41141
448	4822 528 90335
449	4822 492 40799
453	4822 492 50824
454	4822 492 62233
456	4822 492 62234
458	4822 498 50145
459	4822 303 30248
461	4822 443 61047
462	4822 321 10105

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.